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Result
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Maximum Match 100%
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  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Copyright (c) 1993 - 2000 Compugen Ltd.
  В
                PHSL_DESBN
PAP2_MANSE
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19.831 Million cell updates/sec
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P30254 manduca sex
P14405 streptomyce
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## ALIGNMENTS

RESULT PAP2_M ID P AC P DI 0 DI 0 DI 1 DI 1 DI 1 DI 1 DI 1 DI 1 DI 1 DI 1	å å	% # C	SQ .	ឧឧឧ	88888	REEROS	R	R COSE DE
MANSE PAP2_MANSE STANDARD; PRT; 23 AA. P30554; - 930544; - 01-APR-1993 (Rel. 25, Created) 01-APR-1993 (Rel. 25, Last sequence update) 15-UUL-1999 (Rel. 38, Last annotation update) 15-UUL-1999 (Rel. 38, Last annotation update) PARALYTIC PEPTIDE II (Pp II) Manduca sexta (Tobacco hawkmoth) (Tobacco hornworm). Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;	14 PACDGER 20      :: 6 PAADGKK 12	Query Match 23.6%; Score 26; DB 1; Length 19; Best Local Similarity 57.1%; Pred. No. 3.4e+02; Matches 4; Conservative 2; Mismatches 1; Indels 0; Gaps 0;	PROSITE; PS00507; NI_HGENASE_L_1; PARTIAL.  PROSITE; PS00508; NI_HGENASE_L_2; PARTIAL.  Oxidoreductase; Periplasmic; Nickel; Selenium; Selenocysteine.  NON_TER 19	!- SIMILARITY: BELONGS TO SUBUNIT FAMILY. IR; H27480; H27480. NTERPRO; IPRO01501;	L ION, TWO 4FE-4S CLUSTERS AND ONE R OF A LARGE AND A SMALL SUBUNIT.	tification of three c. fovibrio."; fovibrio."; mm. Biophys. Res. Com ATALYTIC ACTIVITY: 2   FREDONIN + H/2)	SEQUENCE.  SEQUENCE.  MEDLINE-88106446; PubMed-3322275;  MEDLINE-88106446; PubMed-3322275;  MEDLINE-88106446; PubMed-3322275;  MEDLINE-88106446; PubMed-3322275;  MEDLINE-88106446; PubMed-3322275;  MEDLINE-88106446; PubMed-3322275;  MOUTA I., Moura J.J.G., Pattl D., Huynh B.H.;  MOUTA I., Moura J.J.G., Pattl D., Huynh B.H.;	PHSI_DESBN STANDARD; PRT; 19 AA. PHSI_DESBN STANDARD; PRT; 19 AA. PHSI_DESBN STANDARD; PRT; 19 AA. P13066; O1-JAN-1990 (Rel. 13, Created) O1-JAN-1990 (Rel. 37, Last sequence update) 15-DEC-1998 (Rel. 37, Last annotation update) PERLPLASMIC [NIFESE] HYDROGENASE LARGE SUBUNIT (EC 1.18.99.1) (NIFESE HYDROGENLYASE LARGE CHAIN) (FRACKENT). Desulfovibrio baculatus (strain Norway 4). Bacteria; Proteobacteria; delta subdivision; Desulfomicrobium.

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RESULT 3
XYLA_STRVN
ID XYLA_STRVN
AC P14405;
DT 01-JAN-1990
DT 01-JAN-1999
DE XYLOSE ISOM
OS Streptomycete
RN [1]
RN [1]
RA SEQUENCE
RC STRAIN=LMG
RX MEDLINE=901
RA Vangrysperr
RT "Single act
RT Violaceorub
RT Violaceorub
RT SUBUNIT
CC -!- CATALYI
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SEQUENCE
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SEQUENCE:
MEDLINE-91302298; Pubmed-2071576;
MEDLINE-91302298; Pubmed-2071576;
                                                                                                                                                                                                                                                                                      BIOCHEM. J. 263:195-199(1989).

BIOCHEM. J. 263:195-199(1989).

-!- CATALYTIC ACTIVITY: D-XYLOSE = D-XYLULOSE.

-!- CACTOR: MAGNESIMI IS NECESSARY FOR THE ACTIVITY.

-!- SUBURT: HONOTETRAMER.

-!- SUBCELLULAR LOCATION: CYTOPLASMIC.

-!- SIMILARITY: BELONGS TO THE XYLOSE ISOMERASE FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=90104230;
Vangrysperre W., F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
XYLOSE ISOMERASE (EC 5.3.1.5) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                           violaceoruber. Identification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-LMG 7183;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Streptomyces violaceoruber. Bacteria; Firmicutes; Actin
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Sphingiodea; Sphingidae;
                                                                                                                                                                                                                   PROSITE; PS00172; XYLOSE_ISOMERASE_1; PROSITE; PS00173; XYLOSE_ISOMERASE_2;
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                                                                                                                                                                                                                                                                                                                                                                                                                "RAINE-M6 /100;
IPAINE-90104230; PubMed-2604694;
IRDLINE-90104230; PubMed-2604694;
Pangrysperre W., Ampe C., Kersters-Hilderson H., Tempst P.;
Pangrysperre W., Ampe C., Kersters-Hilderson H., Tempst P.;
Pangrysperre W., Tempt Identification by chemical derivatization and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Isolation and identification of the lepidopteran insects Manduca
                                                     Local
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 8 HATDLLP
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FUNCTION: CAUSES RAPID, RIGID PARALYSIS WHEN INJECTED INTO FUNCTION: CAUSES RAPID, RIGID PARALYSIS WHEN INJECTED INTO LEPIDOPTERAN LARVAE. THE PHYSIOLOGICAL ROLE MAY BE TO REDUCE HEMOLYMPH LOSS FOLLOWING INJURY AND PROMOTE WOUND HEALING.
SIMILARITY: BELONGS TO THE GBP / PSP1 / PARALYTIC PEPTIDE FAMILY
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2420 MW;
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1375
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43.8%;
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dae; Sphinginae; Manduca.
                                                   21.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18
                                                                                                                             MW;
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                                  Score 24; DB Pred. No. 4.5e

1; Mismatches
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Pred. No. 5.9e+02
l; Mismatches
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OB26CB5C31265FE4 CRC64;
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                                                                                                                                                                                                      metabolism;
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4.5e+02;
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21-JUL-1986
15-DEC-1998
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SEQUENCE
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PAP1.

PA
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O PAPL MANSE

C P30253;

O 1-APR-1993 (Rel. 25, Created)

T 01-APR-1993 (Rel. 25, Last sequence update)

T 01-APR-1999 (Rel. 38, Last annotation update)

OT 15-UIL-1999 (Rel. 38, Last annotation update)

PARALYTIC PEPTIDE I (PP I).

OS Manduca sexta (Tobacco hawkmoth) (Tobacco hornworm).

OS Manduca sexta (Tobacco hawkmoth) (Tobacco hornworm).

OC Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Inso

OC Pterygota; Neoptera; Endopterygota; Lepidoptera; Glossa;

OC Pterygota; Sphingidae; Sphinginae; Manduca.
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Amino acid sequence of heat-stable escherichia coli pathogenic for man.
J. Biol. Chem. 256:7744-7746(1981).
SEQUENCE.
TISSUE-HEMOLYMPH;
MEDLINE-91302298;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INTERPRO; IPRO01489; PROSITE; PS00273; EN
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HSSP; P01559; 1ETN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Shimonishi Y., Hidaka
Miwatani T., Takeda Y.
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MEDLINE-81264141; PubMed-7021541;
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Bacteria; Proteobacteria; gamma subdivision; Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-87191003; PubMed-3552731; Shimonishi Y., Hidaka Y., Koizumi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFIDE BONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       y Match 21.8%; Local Similarity 80.0%; nes 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14 PACDG 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FUNCTION: TOXIN WHICH ACTIVATES THE PARTICULATE FORM OF GUANYLATE CYCLASE AND INCREASES CYCLIC GMP LEVELS WITHIN THE HOST INTESTINAL EPITHELLAL CELLS.
DISEASE: BOTH HEAT-STABLE AND HEAT-LABILE ENTEROTOXINS ARE PRODUCED BY PATHOGENIC STRAINS OF E.COLI AND AFFECT THE DIGESTIVE TRACT OF MAMMALS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY: BELONGS TO THE HEAT-STABLE ENTEROTOXIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Enterotoxin.
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(Rel. 01, Last sequence up
(Rel. 37, Last annotation
ENTEROTOXIN ST-2 (ST-B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA;
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        PubMed=2071576;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENTEROTOXIN_H_STABLE;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 24; DB Pred. No. 6.8e 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ã
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                                                                                                                                                                                                       Glossata;
                                                                                                                                                                                       Insecta;
ssata; Ditrysia;
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SOURCE CCC CCC RTT RAA
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Best Local S
Matches 7
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P38553;
01-OCT-1994
                                                                                                                                                          SEQUENCE.
SPECIES-S.GREGARIA; TISSUE-THORACIC NERVOUS SY.
MEDLINE-8246543; PubMed-2719702;
Robb S., Packman L.C., Evans P.D.;
"Isolation, primary structure and bioactivity
FMRF-amide-like neuropeptide from the locust,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOCMI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Locusta migratoria (Migratory locust), and Schistocerca gregaria (Desert locust). Schistocerca gregaria (Desert locust). Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Pterygota; Neoptera; Orthopteroidea; Orthoptera; Caei Acridomorpha; Acridoidea; Acrididae; Locusta.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-1994 (Rel. 30, Created)
01-OCT-1994 (Rel. 30, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
SCHISTOFLRFAMIDE (PDVDHFLRF-AMIDE) (CARDIQEXCITATORY NEUROPEPTIDE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Skinner W.S.,
Quistad G.B.;
                                        PIR;
                                                              Biochem. Biophys. Res. Commun. 160:850-856(1989).

- FUNCTION: MUSCLE INHIBITING AGENT. INVOLVED IN THE NEURAL CONTRO
OF THE VISCERAL MUSCLES OF THE HEART, ACCESSORY GLANDS AND
OF THE VISCERAL MUSCLES OF THE HEART, ACCESSORY GLANDS OF THE MALE ACCESSORY GLANDS.

- TYPISUE SPECIFICITY: FOUND IN AXONS OF THE MALE ACCESSORY GLANDS,
THE SAMLIVARY GLANDS, THE HEART, AND THE OVIDUCT.

- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
                                                                                                                                                                                                                                                                                                                                            SPECIES-L.MIGRATORIA; TISSUE-BRAIN; MEDLINE-93324430; PubMed-7687352; Schoofs L., Holman G.M., Paemen L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Isolation and identification of
the lepidopteran insects Manduca
            Neuropeptide;
MOD_RES 1
                                                                                                                                                                                                                                                     Peptides 14:409-421(1993).
[2]
                                                                                                                                                                                                                                                                                        "Isolation, identification, and synthesis of PDVDHFLRFamide (SchistoFLRFamide) in Locusta migratoria and its association make accessory glands, the salivary glands, the heart, and
                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Heliothis virescens."
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                                                        FAMILY
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                                        A32543; A32543.
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7; Conserv
10 AA;
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                           Amidation.
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  1244
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2436
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AMIDATION.
D3C51729D2C1EAB2 CRC64;
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0B26CB5C29855FE4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            paralytic peptides from hemolymph sexta, Spodoptera exigua, and
                                                                                                                                                                                                                                                                                                                                              Veelaert D.,
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                                                                                                                                                                                                                          NERVOUS SYSTEM
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8.6e+02;
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                                                                                                                                                                                                                                                                                         its association with the heart, and the
                                                                                                                                                                      of schistoflrf-amide, Schistocerca
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                                                                                                                                 IN THE NEURAL CONTROL
                                                                                                                                                                                                                                                                                                                                              Amelinckx
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Query Match Best Local Similarity

57

Score Pred.

23; No.

DB 1; 5.5e+02;

Length

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Best Local S
Matches 4
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P21144; P41497;

P01-MAY-1991 (Rel. 18, Created)

O1-FEB-1994 (Rel. 28, Last sequence update)

O1-NOV-1995 (Rel. 32, Last annotation update)

LEUCOMYOSUPPRESSIN (LMS) (LEM-MS).

Leucophaea maderae (Madeira cockroach).

ENKaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Ins
Pterygota; Neoptera; Orthopteroidea; Dictyoptera; Blaberoidea; Blaberidae; Leucophaea.
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-I-FUNCTION: INHIBITS THE SI
PROYDODEUM (HINDGUY).
Neuropeptide; Amidation.
MOD_RES 1 1 1
MOD_RES 10 10
SEQUENCE 10 AA; 1275 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1
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P41494;
01-NOV-1995
01-NOV-1995
01-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LEUMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drosophila melanogaster (Fruit fly), and sarcophaga bullata (Grey flesh fly) (Neobellieria bullata) Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insec Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Metazoa; Brachycera; Metazoa; Drosophila.
Fonagy A., Schoofs L., Proost P., "Isolation, primary structure and myoinhibiting neuropeptide from th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NEMS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DROME
                                                                                                       SPECIES-S.BULLATA;
MEDLINE-93047886; 1
                                                                                                                                                                                                                                            TDVDHVFLRFamide a
                                                                                                                                                                                                                                                                                                                                                    Nichols R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cockroach
                                                                                                                                                                               SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-93002195;
                                                                                                                                                                                                                                                                                                                                                                                                                    SPECIES=D.MELANOGASTER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isolation, primary structure and synthesis of leucomyosuppressin, in insect neuropeptide that inhibits spontaneous contractions of tookroach hindgut.";
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nes 4; Conserv
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                                                                                                                                                                                                                                            and structural characterization of Drosophila
amide and FMRFamide-containing neural peptides
urosci. 3:213-218(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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    32, Created)
    32, Last sequence upol
    33, Last annotation unit
    N (NEB-MS).

                                                                                                PubMed=1358537;
                                                                                                                                                                                                                                                                                                                                                                                        PubMed-1390001;
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57.1%;
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THE SPONTANEOUS CONTRACTIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23; DB Pred. No. 5.5e 2; Mismatches
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Van Damme J., Bueds H., De Loos
synthesis of neomyosuppressin,
he grey fleshfly, Neobellieria
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                                                                       De Loof A.;
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P36503;
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01-JUN-1994
15-DEC-1998
       MEDLINE-91107436; PubMed-2125590; Eredenhagen A., Fendrich G., Marki F., Marki W., Gru Raschdorf F., Peter H.H.; "Duramycins B and C, two new lanthionine containing inhibitors of phospholipase A2. Structural revision cinnamycin.";
                                                                                            Streptomyces griseoluteus.
Streptomyces griseoluteus.
Bacteria; Firmicutes; Actinobacteria; Actinobacterida
Bacteria; Firmicutes; Actinobacteria; Actinobacterida
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SEQUENCE
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Luykx D.M.A.M., Kim S.W., de Vries S.,
Submitted (JUL-1996) to the SWISS-PROT
-i- CATALYTIC ACTIVITY: AN ALDEHYDE + P
REDUCED ACCEPTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Comp. Biochem. Physiol. 1020
i:-FUNCTION: MYOINHIBITING
FLYBASE; FBgn0013996; Nems.
Neuropeptide; Amidation.
MOD_RES 10 10
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Comp. Biochem. Physiol. 102C:239-245(1992).
cinnamycin."
J. Antibiot.
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ALDEHYDE DEHYDROGENASE, BETA CHAIN (EC 1.2.99.3) (ALDH) (FRAGMENT).
Commanonas testosteroni (Pseudomonas testosteroni).
Bacteria; Proteobacteria; beta subdivision; Comamonadaceae; Comamon
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Tetrahedron Lett. 26:665-668(1985).
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01-FEB-1995 (Rel. 31, Created)
01-FEB-1995 (Rel. 31, Last sequence up
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LANTIBIOTIC ANCOVERIN.
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"Solution structures of the lantibiotics duramycin B and C.";
Eur. J. Blochem. 216:419-428(1993).
-i- FUNCTION: ACTS AS INHIBITOR OF PHOSPHOLIPASE A2.
-i- PTM: MATURATION OF LANTIBIOTICS INVOLVES THE ENZYMIC CONVERSION
THR, SER, AND CYS INTO DEHYDRATED AA AND THE FORMATION OF SULFI
BRIDGES. THIS IS FOLLOWED BY THE MEMBRANE TRANSLOCATION AND
CLEAVAGE OF THE MODIFIED PRECURSOR.
-I- SIMILARITY: STRUCTURAL SIMILARITY TO OTHER TYPE B LANTIBIOTICS.
                                                                                                         MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                 Streptomyces sp. (strain A647P-2).
Bacteria; Firmicutes; Actinobacteria; Actinobacterid
Actinomycetales; Streptomycineae; Streptomycetaceae;
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MEDLINE=93387292; PubMed=8375380;
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Peptides 1992, pp.519-520, Escom Science Publishers,
                                                                     THIOETH
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01-MAY-1992 (Rel. 22, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
60 KDA CHAPERONIN, MITOCHONDRIAL (P60) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INTERPRO; IPROULD44; ...
PROSITE; PS00296; CHAPERONINS_CPN60;
PROSITE; PS00296; CHAPERONINS_CPN60;
Chaperone; ATP_binding; Testis; Mitoc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hellothis virescens (Noctuid moth) (Owlet moth)
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Eukaryota; Neoptera; Endopterygota; Lepidoptera; Glossata; Di
Noctuoidea; Noctuidae; Heliothinae; Heliothis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HELVI
   MEDLINE-95045586; PubMed-7957245; Tsiboli P., Herfurth E., Choli T.;
                                                                 SEQUENCE
                                                                                                                               Thermus aquaticus
Bacteria; Thermus,
                                                                                                                                                                                                 RPSK OR RPS11
                                                                                                                                                                                                                                                                                                                                                    RS11_THETH P80376;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -i- DEVELOPMENTAL STAGE: FROM THE SECOND HALF OF INSTAR, THROUGH THE FIRST TWO DAYS OF PUPAL C-i- MISCELLANEOUS: SHOWS ATPASE ACTIVITY.
-i- SIMILARITY: BELONGS TO THE CHAPERONIN (HSP60)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Miller S.G., Leclerc R.F., Erdos G.W.;

"Identification and characterization of a testis-specific isoform of

"Identification and characterization of a testis-specific isoform of

"Identification and characterization of a testis-specific isoform of

"Identification in a moth, Heliothis virescens.";

J. Mol. Biol. 214:407-422(1990).

"ITENIOR BIOL. 214:407-422(1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=90339485; PubMed=1974308;
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                                                                                                                                                                                                                           RIBOSOMAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY).
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                                                                                                                                                                                                                                                         (Rel. 31, Created)
(Rel. 31, Last seq
(Rel. 32, Last ann
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                                                                                                                                                             thermophilus)
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                                                                                                                                                                                                                                                     sequence update) annotation updat
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Pred. No. 1.96
1; Mismatches
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                                                                                                                               Thermus
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1.9e+03;
7;
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                                                                                                                         group; Thermus.
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DEVELOPMENT.
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DURA_STRGV
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Best Local S
Matches 3
                                                                                                                                                                                                                                              Fredenhagen A., Fendrich G., Marki F., Marki W., Gruner J.,
Raschdorf F., Peter H.H.;

"Duramycins B and C, two new lanthionine containing antibiotics as
inhibitors of phospholipase A2. Structural revision of duramycin and
cinnamycin.";

J. Antibiot. 43:1403-1412(1990).

J. Antibiot. 43:1403-1412(1990).

J. Antibiot. 43:1403-1412(1990).

J. Antibiot. 43:1403-1412(1990).

T. FUNCTION: ACTS AS INHIBITOR OF PHOSPHOLIPASE A2.

-1- PTM: MATURATION OF LANTIBIOTICS INVOLVES THE ENZYMIC CONVERSION OF
THR, SER, AND CYS INTO DEHYDRATED AA AND THE FORMATION OF SULFIDE
BRIDGES. THIS IS FOLLOWED BY THE MEMBRANE TRANSLOCATION AND
CLEAVAGE OF THE MODIFIED PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DURA_STRGV
P36504;
01-JUN-1994
                                                                                             Antibiotic;
MOD_RES
MOD_RES
MOD_RES
MOD_RES
MOD_RES
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01-JUN-1994 (Rel. 29, Last sequence update)
01-JUN-1994 (Rel. 29, Last annotation updat
LANTIBLOTIC DURAMYCIN (LEUCOPEPTIN) (ANTIBI
Streptoverticillium griseoverticillatum.
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NON_TER 25
SEQUENCE 25 AA;
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but'To Biochem. 226:169-177(1994).

-I- FUNCTION: S11 PLAYS AN ESSENTIAL ROLE FOR THE SELECTION OF THE CORRECT TRNA IN PROTEIN BIOSYNTHESIS. IT IS LOCATED ON THE LA LOBE OF THE SMALL SUBUNIT (BY SIMILARITY).

-I- SIMILARITY: BELONGS TO THE S11P FAMILY OF RIBOSOMAL PROTEINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bacteria; Firmicutes; Actinobacte
Actinomycetales; Streptomycineae;
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Itazaki H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INTERPRO; IPR001971; -.
PROSITE; PS00054; RIBOSOMAL_S11;
    SEQUENCE
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Fredenhagen A., Fendrich G., Marki F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
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|::||:
18 AYIHAS
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                                                                                                                                                                                                                                            SIMILARITY:
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D-ALANINE.
D-ALANINE (BONDED TO 19).
D-ABU (AMINOBUTYRIC ACID).
D-ABU (AMINOBUTYRIC ACID).
LYSINOALANINE (BONDED TO 6).
ABU-S-CYS (METHYLLANTHIONINE).
ABU-S-CYS (LANTHIONINE).
ABU-S-CYS (LANTHIONINE).
ABU-S-CYS (METHYLLANTHIONINE).
O12951AE27362F00 CRC64;
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2e+03;
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Query Match Best Local S Matches

h 19.1%; Similarity 100.0% 3; Conservative

J.08; 0;

Score 21; DB Pred. No. 2.2 0; Mismatches

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Best Local :
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    ULT 16
0_BOVIN
CH60_BOVIN
P31081;
01-JUL-1993
01-JUL-1993
01-OCT-2000
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MOD_RES
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MOD_RES
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DURB_ST
P36502;
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"Solution structures of the lantibiotics duramycin B and C.";
Eur. J. Biochem. 216:419-428(1993).
-i- FUNCTION: ACTS AS INHIBITOR OF PHOSPHOLIPASE A2.
-i- PTM: MATURATION OF LANTIBIOTICS INVOLVES THE ENZYMIC CONVETER, SER, AND CYS INTO DEHYDRATED AA AND THE FORMATION OF BRIDGES. THIS IS FOLLOWED BY THE MEMBRANE TRANSLOCATION AN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Streptoverticillium sp. (strain R2075).
Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
Actinomycetales; Streptomycineae; Streptomycetaceae;
                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
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cinnamycin.";
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Raschdorf F., Pe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=91107436; PubMed=2125590;
Fredenhagen A., Fendrich G., Marki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
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01-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Antibiotic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zimmermann N., Freund S., Fredenhagen A., Jung G.; "Solution structure of the lantiblotics duramycin B & (In) Schneider C.H., Eberles A.N. (eds.); Peptides 1992, pp.519-520, Escom Science Publishers,
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ns B and C, two new lanthionine containing
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    (Rel.
(Rel.
(Rel.
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D-ABU (AMINOBUTYRIC ACID).
LYSINOALANINE (BONDED TO 6).
ABU-S-CYS (METHYLLANTHIONINE).
ALA-S-CYS (LANTHIONINE).
ABU-S-CYS (METHYLLANTHIONINE).
0133445E27362F00 CRC64;
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE B LANTIBIOTICS.
                                                                                                                                                                                                                                                                                                      Length 19;
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Best Local
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P15987;
01-APR-1990
01-APR-1990
15-JUL-1999
ACTIN 7 (FRAC
                                                                                                                                                                                                                                                                                                                                                                                                         ACT7_
                                                                                                                                                                                                                                                            Eukaryota, Viridiplantae, Embryopny
Eukaryota, Viridiplantae, Embryopny
Magnoliophyta; eudicotyledons; core
Tahales; Fabaceae; Papilionoideae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Molecular mimicry in Lyme disease: monoclonal antibody H9724 to burgdorferi flagellin specifically detects chaperonin-HSP60."; biochim. Biophys. Acta 1181:97-100(1993).

1- FUNCTION: INFLICATED IN MITCCHONDRIAL PROTEIN IMPORT AND MACROMOLECULAR ASSEMBLY. MAY FACILITATE THE CORRECT FOLDING IMPORTED PROTEINS. MAY ALSO PREVENT MISFOLDING AND PROMOTE REFOLDING AND PROPER ASSEMBLY OF UNFOLDED POLYPEFTIDES GENEROLDING AND PROPER ASSEMBLY OF UNFOLDED POLYPEFTIDES GENEROLDING AND PROPER ASSEMBLY OF UNFOLDED POLYPEFTIDES GENEROLDING AND FRODER ASSEMBLY OF UNFOLDED POLYPEFTIDES.

1- SUBCELLULAR LOCATION: MITOCHONDRIAL MATRIX.

1- SUBCELLULAR LOCATION: MITOCHONDRIAL MATRIX.
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Eukaryota; Metazoa;
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                                                                                                                                        Plant Mol.
                                                                                                                                                             "Diverse soybean actin transcrip
"Diverse soybean actin transcrip
                                                                                                                                                                                             Pearson L., Meagher R.B.;
                                                                                                                                                                                                            MEDLINE=91346640; PubMed=2102831;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INTERPRO; IPRO01844; -.
PROSITE; PS00296; CHAPERONINS_CPN60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-93208180;
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          FUNCTION: ESSENTIAL COMPONENT OF CELL CYTOSKELET IMPORTANT ROLE IN CYTOPLASMIC STREAMING, CELL SH CELL DIVISION, ORGANELLE MOVEMENT AND EXTENSION SUBCELLULAR LOCATION: CYTOPLASMIC.
MISCELLANEOUS: THERE ARE AT LEAST 16 ACTIN GENES SIMILARITY: BELONGS TO THE ACTIN FAMILY.
                                                                                                         nt Mol. Biol. 14:513-526(1990).
FUNCTION: ACTINS ARE HIGHLY CONSERVED
IN VARIOUS TYPES OF CELL MOTILITY AND
                                                                                               IN ALL EUKARYOTIC CELLS
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180; PubMed-8096152;
Stein S., Li
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Cetartiodactyla; Ruminantia;
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minantia; Pecora; Bovoidea
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NG, CELL SHAPE
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o vertebrate |
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01-APR-1990
01-APR-1990
15-JUL-1999
                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                 genes.";
Plant MOI. Biol. 14:513-526(1990).
-!- FUNCTION: ACTINS ARE HIGHLY CONSERVED
IN VARIOUS TYPES OF CELL MOTILITY AND
IN ALL EUKARYOTIC CELLS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                             EMBL; x17119; CAA34979.1; PIR; $15754; $15754. INTERPRO; IPR000279; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Fabales; Fabaceae; Papillonoideae; Glycine.
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NON_TER 13 13
SEQUENCE 13 AA; 1420 MW; 8BEFF3C3
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PROSITE: PS00432; ACTINS_2; PARTIAL.
PROSITE: PS01132; ACTINS_ACT_LIKE; PARTIAL
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PIR; S15755; S1
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                                                                                                                                                                                                                                                                                                                                                                                                                               Pearson L., Meagher R.B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-91346640; PubMed-2102831;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.
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                                                                                                                                                                                                                     FUNCTION: ESSENTIAL COMPONENT OF CELL CYTOSKELETO IMPORTANT ROLE IN CYTOPLASMIC STREAMING, CELL SHA CELL DIVISION, ORGANELLE MOVEMENT AND EXTENSION GUSCELLULAR LOCATION: CYTOPLASMIC.
MISCELLANEOUS: THERE ARE AT LEAST 16 ACTIN GENES SIMILARITY: BELONGS TO THE ACTIN FAMILY.
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 PS00406;
PS00432;
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(Rel. 14, Last sequence up
(Rel. 38, Last annotation
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ACTINS_1;
ACTINS_2;
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 PARTIAL.
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Pred. No. 1.8e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8BEFF3C36D4FD05A CRC64;
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                                                                                                                                                                                                                                                                   OF CELL CYTOSKELETON;
STREAMING, CELL SHAPE
MENT AND EXTENSION GROW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   on update)
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1.8e+03;
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to vertebrate musc
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                                                                                                                                                                                                                                     IN SOYBEAN
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                                                                                                                                                                                                                                                                                                                                 RE INVOLVED
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RESULT 20
FARP_MANSE STANI
ID FARP_MANSE STANI
AC P18523;
DT 01-NOV-1990 (Rel. 1)
DT 01-FEB-1994 (Rel. 2)
DT 01-NOV-1995 (Rel. 3)
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FLAA_TF
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Best Local
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Best Local
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NON_TER
SEQUENCE
Hunt D.F.; "A new pep
                                                                                                                                                               Manduca sexta (Tobacco hawkmoth) (Tobacco hornworm).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda;
Pterygota; Neoptera; Endopterygota; Lepidoptera; Glos
Sphingiodea; Sphingidae; Sphinginae; Manduca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-88314903; PubMed-3045083;
MORTIS S.J., Charon N.W., Cook R.G., Fuentes M.D., Limberger R.J.;
"Antigenic relatedness and N-terminal sequence homology define two
classes of periplasmic flagellar proteins of Treponema pallidum
subsp. pallidum and Treponema phagedenis.";
J. Bacteriol. 170:4072-4082(1988).
-!- FUNCTION: COMPONENT OF THE OUTER LAYER OF THE FLAGELLA.
-!- SUBUNIT: OUTER LAYER COMPOSED OF REPEATING UNITS OF FLAA AND A
CORE THAT CONTAINS ONE OR ALL OF FIVE ANTIGENICALLY RELATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FLAA_TREPH STANDARD; PRT; 25 AA.
P21983;
01-AUG-1991 (Rel. 19, Created)
01-AUG-1991 (Rel. 19, Last sequence update)
01-AUG-1991 (Rel. 19, Last annotation update)
FLAGELLAR FILAMENT OUTER LAYER PROTEIN (SHEATH PROTEIN) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TREPH
                                     MEDLINE-91045350; PubMed-2235684;
Kingan T.G., Teplow D.B., Phillips J.M.,
Hildebrand J.G., Homberg U., Kammer A.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FLAA.
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                                                                                                                                                                                                                                                                       FMRFAMIDE-LIKE NEUROPEPTIDE.
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                                                                                                                      SEQUENCE
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PIR; B32351; B32351.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bacteria;
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peptide
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Spirochaetales;
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25 2
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                                                                                                                                                                                                                                                                                         16, Created)
28, Last sequence up
32, Last annotation
the FMRFamide family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18.6%;
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Pred. No. 3.4e+03;
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Pred. No. 2
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                                             A.E.,
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                                   , Riehm J.P., k
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  the CNS of the
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                                             Rao K.R.,
Griffin P.R.,
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                                                                                                                                                                                           Ditrysia;
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RESULT
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DT 2:
DT 2
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CXA1_CONST
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Best Local
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  21-JUL-1986 (Rel. 01,
21-JUL-1986 (Rel. 01,
01-NOV-1988 (Rel. 09,
ALPHA-CONOTOXIN GII.
                  CXA2_CONGE
CXA2_CONGE
P01520;
21-JUL-1986
21-JUL-1986
01-NOV-1988
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DISULFID
MOD_RES
SEQUENCE
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Peptides 1
-i- FUNCTI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Biochemistry 27:7102-7105(1988).
-!- FUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTIC BIND TO THE NICOTINIC ACETYLCHOLINE RECEPTORS (INHIBIT THEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conus striatus (Striated cone).
Eukaryota; Metazoa; Mollusca; Gas
Neogastropoda; Conoidea; Conidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-APR-1990 (Rel. 14, Ci
01-APR-1990 (Rel. 14, La
01-DEC-1992 (Rel. 24, La
ALPHA-CONOTOXIN SI (SI)
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P15471;
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HSSP; P01519; 1NOT.
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MEDLINE=89062448;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Postsynaptic
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Peptides 11:849-856(1990),

FUNCTION: INCREASES THE FORCE OF NITHE MAJOR POWER-PRODUCING FLIGHT ME MUSCLES AND SO IS LIKELY TO PLAY A FLIGHT BEHAVIOR PATTERNS.

FSIMILARITY: BELONGS TO THE FARP (FM FAMILY.
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4; Conserv
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3; Conser
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13
AA;
                                                                                                                                                                                                                                                                           Conservative
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                                                                                                  STANDARD;
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13
13
1359 MW;
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57.1%;
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Last annotation update)
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Last annotation updat
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                                                                                                                                                                                                                                                                                           .28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Acetylcholine receptor inhibitor;
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                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                         Score 20; DB
Pred. No. 2.1
0; Mismatches
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Pred. No. 1.7e+03;
2; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                      AMIDATION.
DEE90F8EF2457EBD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gastropoda;
dae; Conus.
                                                                                                  PRT;
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(NACHR) AND
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RESULT 23
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P28878;
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DISULFID
MOD_RES
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MEDLINE-84032400; PubMed-6630187;
Gray W.R., Rivier J.E., Galyean R., C
"Conotoxin MI. Disulfide bonding and
J. Biol. Chem. 258:12247-12251(1983).
[3]
                                                                                                                                                                                                                                                                   Biochemistry 30:9370-9377(1991).
-!- FUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTIC MEMBRANES,
BIND TO THE NICOTINIC ACETYLCHOLINE RECEPTORS (NACHR) AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-91369955; PubMed-1892838;
Myers R.A., Zafarella G.C., Gray W.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Mollusca; Gastropoda; Neogastropoda; Conoidea; Conidae; Conus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIR; A01783; NTKN2G. HSSP; P01519; INOT.
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-1- FUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTIC MEMBRANES, BIND TO THE NICOTINIC ACETYLCHOLINE RECEPTORS (NACHR) AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIJINE-81191854; PubMed-7014556; Gray W.R., Luque A., Olivera B.M., Barrett J., "Peptide toxins from Conus geographus venom."; J. Biol. Chem. 256:4734-4740(1981).
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[1]
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Eukaryota; Metazoa; Mollusca; Gas
      SEQUENCE
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01-DEC-1992 (Rel. 24, Last sequence up
01-DEC-1992 (Rel. 24, Last annotation
ALPHA-CONOTOXIN SIA (SIA)
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                                                                                                                                       Venom
                                                                                                                                                               Postsynaptic
                                                                                                                                                                                                        PIR; A40312;
                                                                                                                                                                                                                                                                                                                                                                        receptors.";
                                                                                                                                                                                                                                                                                                                                                                                                                                          Olivera B.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Neogastropoda;
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                                                                                                                                                                                                                                                                                                                                                                                                       "Alpha-conotoxins, small
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity hes 3; Conserv
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13 AA;
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                                                                                                                                                                      neurotoxin;
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      WW;
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   AMIDATION.
DEF1931982457EBD CRC64;
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Pred. No.
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DEEE831C39297EBD CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          receptor inhibitor;
                                                                                                                                                                      receptor inhibitor;
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2.1e+03;
                                                                                                                                                                                                                                                                                                                                                                                                       of nicotinic acetylcholine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cruz L.J.,
                                                                                                                                                                                                                                                                          AND
                                                                                                                                                                         Amidation;
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CXALCONMA

STANDANCE

P01521;

T 21-JUL-1986 (Rel. 01, Created)

T 21-JUL-1986 (Rel. 01, Last sequence update)

T 01-DEC-1992 (Rel. 24, Last annotation update)

DE ALPHA-CONOTOXIN MI (M1).

OS Conus magus (Magus cone).

CELEMATYOTA; Metazoa; Mollusca; Gastropoda; Caeno

Nacrastropoda; Conoidea; Conidae; Conus.
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CXA1_CONCN STANDARD; PRT; 14 AA.

ID CXA1_CONCN STANDARD; PRT; 14 AA.

AC p56973;
DT 01-0CT-2000 (Rel. 40, Created)
DT 01-0CT-2000 (Rel. 40, Last sequence update)
DT 01-0CT-2000 (Rel. 40, Last annotation update)
DT 01-0CT-2000 (Rel. 40, Last annotation update)
DE ALPHA-CONOTOXIN CNIA [CONTAINS: ALPHA-CONOTOXIN CNIB].

CS Conus consors.

CC Conus consors.

CC Conus consors.

CC CONUS CONSORS: Metazoa; Mollusca; Gastropoda; Caenogastropoda;

CN (1) POST CONTAINS: Conidae; Conus.
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CXA1_CONMA
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PEPTIDE
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-I- FUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTIC MEMBRANES,
BIND TO THE NICOTINIC ACETYLCHOLINE RECEPTORS (NACHR) AND
INHIBIT THEM. THIS PEPTIDE SEEMS TO BE A POTENT AND SELECT
BLOCKER OF MUSCULAR SUBTYPE OF NACHR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Biochemical characterization and nuclear magnetic resonance structure of novel alpha-conotoxins isolated from the venom consors.";       
MEDLINE=83073458; PubMed=7149738;
McIntosh J.M., Cruz L.J., Hunkapiller M.W.,
"Isolation and structure of a peptide toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-99255390; PubMed-10320362;
Favreau P., Krimm I., le Gall F., Bobenrieth M.J., Lamthanh H.,
Bouet F., Servent D., Molgo J., Menez A., Letourneux Y.,
Lancelin J.-M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Postsynaptic neurotoxin; Acetylcholine receptor inhibitor; Amidation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PDB; 1845; 09-JUL-99.
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Similarity 100.0%;
3; Conservative (
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                                                                    usca; Gastropoda; Caenogastropoda; Conidae; Conus.
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DEEE91969BF5E5BD CRC64;
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2.1e+03;
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 W.R., Olivera
the marine sna
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 era B.M.;
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Gray W.R., Olivera B.M., Cruz L.J.;
"Peptide toxins from venomous Conus snails.";
Annu. Rev. Blochem. 57:665-700(1988).
-i- FUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTIC MEMBRANES,
BIND TO THE NICOTINIC ACETYLCHOLINE RECEPTORS (NACHR) AND
INHIBIT THEM.
INHIBIT THEM.
                                                                                                                                                                                                                                                                                                                                                                                                                             Conus magus.";
Arch, Biochem. Biophys. 218:329-334(1982).
[2]
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Gray W.R., Rivler J.E., Galyean R., Cruz L.J., Olivera B.M.;
"Conotoxin MI. Disulfide bonding and conformational states.";
J. Biol. Chem. 258:12247-12251(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                DISULFIDE BONDS.
                                                                                                                                                                                                                                Postsynaptic neurotoxin; Acetylcholine receptor inhibitor; Amidation;
                                                                                                                                                                                                                                                                                                                                           REVIEW
                                                          14 PAC 16
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6 PAC 8
                                                                                                          Similarity
3; Conserv
                                                                                                                                                                     14 AA;
                                                                                                           Conservative
            February
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100.0%;
            'n
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                                                                                                                      Score 20;
Pred. No.
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DEEE91898BF5E5BD CRC64;
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2.3e+03;
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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.

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Result
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Perfect score:
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103
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(without alignments)
9.913 Million cell updates/sec
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Glutamic acid deca
GAD65 fragment, pe
Peptide derived fr
65 kD Glutamic aci
Glutamic acid deca
GAD65 fragment, pe
GAD65 fragment, pe
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Synthetic rabbit G
Human GAD C-termin
Immunogenic peptid
Spacer peptide for
Pro-rich spacer fo
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Guinea pig TGase3	R42733	14	15	٥.	27	45
Murine TGase3 27 k	R42732	14	15	٥.	27	44
derive	Y51451	21	10	σ.	27	43
0	36	20	9		27	42
	27	13	22		28	41
5	567	19	21	.7	28	0
N-terminal fragmen	R67425	16	20	.7	28	39
ģ	407	15	20	7.	28	38
inhibi	R74077	15	20	.7	28	37
2 protease su	2	16	14	7.	28	36
	8748	19	13	7.	28	35
Antibody 15A.2 bin	5088	21	<b>9</b>	7.	28	34
al antib	959	21	9	.7	28	33
Non-polio enterovi	W59312	19	8	27.2	28	32
Human secreted pro	Y45345	20	25	œ	29	31
Immunogenic Hepati	W42899	18	20		29	30
Thrombin inhibitor	R63268	15	20	.8	29	29
Human MUC11 tandem	Y59291	21	17	8	29	28
Partial N-terminal	R00581	11	25	9	30	27
Sequence of N-term	P70377	œ	25	9.	30	26
_	637	16	18	9	30	25
ial MOMP V	$\mathbf{a}$	16	18	9.	30	24
HIV-1 MO/LAI Nef p	W87486	19	17	9.	30	23
erminal of som	4.1	12	17	9	30	22
epitope #	R26884	13	23		31	21
æ	689	13	19		31	20
N-terminal fragmen	742	16	20		32	19
	123	15	20	۳,	32	18
e lyase I	23	15	20	۳	32	17
acid /	662	15	20		32	16
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inate lyase II	123	15	20	32.0	33	14
Alginic acid Al-II	R56619	15	20		w	13

# ALIGNMENTS

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RESULT
R72297
ID R72
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AC R72
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DT 13-
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 New polypeptide fragments of glutamic acid decarboxylase - for diagnosis and treatment of auto:immune disease, esp. insulin dependent diabetes, also related nucleic acid, vectors, antibodies, hybridoma(s) etc.
                                                                                                                                                                                                                      W09507992-A
                                                                                                                                                                                                                                                                            Glutamic acid decarboxylase; GAD65; auotimmune disorders; insulin-dependant diabetes mellitus; stiff man disease.
Claim 1; Page 77; 100pp; English
                                                                                                       Clare-Salzler MJ,
                                                                                                                                                                                                       23-MAR-1995.
                                                                                                                                                                                                                                                                                                                Glutamic acid decarboxylase (GAD65) fragment.
                                                                                                                                                                                                                                                                                                                                                                 R72297;
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                                                                                 WPI; 1995-131360/17.
                                                                                                                               (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                               24-AUG-1994;
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                                                                                                                                                        17-SEP-1993;
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                                                                                                         Erlander MG,
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RESULT
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Best Local
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                                    This sequence represents a fragment of the glutamic acid decarboxylase 65 (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screeking drugs that alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for pfedicting IDDM and the diagnosis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q86481 and Q86482 encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 were derived. These fragments can be used to detect autoantibodies against GAD, e.g. to diagnose and treat GAD-related autoimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
                           available
                                                                                                                                                                                          Claim 1; Column 43; 61pp; English.
                                                                                                                                                                                                                            Amellorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stiff man disease
                                                                                                                                                                                                                                                                              WPI; 2000-095930/08
                                                                                                                                                                                                                                                                                                        Tobin
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21-SEP-1990;
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18; Conserv
                          from natural sources.
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90US-0586536.
91US-0716909.
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Sequence

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RESULT W18870

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Best Local Similarity
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Stahl P,
                                                                                                                               R76642-62 are derived from human glutamic acid decarboxylase and specifically react with T-cell sub-populations isolated from recently diagnosed Type-I diabetics. Pharmaceutical compsns. conty. these peptides and those shown in R77571-72, are useful for the diagnosis of a disease or predispositions of immune system diseases, tumours, and autoimmune diseases, including diabetes. The peptides are able to detect specific T-cell subpopulations that are then used for antigen prodn.,
                                                                                                                                                                                                                                         Antigen-specific activated T-lymphocytes interaction with inventive peptide(s) of useful in diagnosis of e.g. diabetes and
                                                                                                 Sequence
                                                                                                                      e.g. by reinjection.
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20-JAN-1994;
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diagnosis; autoimmune disease.
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nes 14; Conserv
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BOEHRINGER MANNHEIM GMBH
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94DE-4401629
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peptide-MHC complexes;
auto:immune diseases
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                                                                                                                                                                                                                                                                                                                                                                     W18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for diagnosis of insulin-dependent diabetes mellitus (IDDM). The diagnosis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected by administering an autoreactive substance intradermally and establishing the diagnosis on the basis of the occurrence or lack of a positive reaction at the site of administration. The method is used for diagnosis of autoimmune and tumour diseases, preferably T-cell-mediated diseases such as rheumatoid arthritis, multiple sclerosis and especially IDDM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Skin test
involving
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAD; 65 kD; human; glutamic acid decarboxylase; autoreactive; dia insulin-dependent diabetes mellitus; IDDM; cell-mediated disease; predisposition; autoimmune; tumour; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            65
                                                                    Glutamic acid decarboxylase; GAD65; auotimmune insulin-dependant diabetes mellitus; stiff man
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Pozzilli P,
                     W09507992-A.
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1 visnpaathqdidf 14
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                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                         acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fig 2; 12pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for diagnosis of cell-mediated diseases, esp. intradermal admin. of auto:reactive substances
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                                                                                                                                                                                                                                                                                      Conservative
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K
                                                                                                       decarboxylase
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P;
                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                              70.9%;
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                                                                                                                                                                                                                                                                                                Score 73;
Pred. No.
                                                                                                       (GAD65) fragment.
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                                                                                                                                                                                                                                                                                      Mismatches
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                                                                                                                                                                                                                                                                                                DB 18;
2.7e-06;
                                                                                                                                                                                                                                                                                      0
                                                                    disorders;
disease.
                                                                                                                                                                                                                                                                                                             Length 14;
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23-MAR-1995

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Y59547

ID Y5

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AC Y6

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Best Local :
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21-SEP-1990;
18-JUN-1991;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q86481 and Q86482 encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 encoded. These fragments can be used to detect autoantibodies against GAD. e.g. to diagnose and treat GAD-related autoimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New polypeptide fragments of glutamic acid decarboxylase - for diagnosis and treatment of auto:immune disease, esp. insulin dependent diabetes, also related nucleic acid, vectors, antibodies, hybridoma(s) etc.
                        Ameliorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stif disease -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAD65; glutamic acid decarboxylase 65; autoimmune disorder; IDDM; insulin dependent diabetes mellitus; Stiff man disease; diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-APR-2000
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                                                                                                                             WPI;
                                                                                                                                                                                                                                                                                                                                                                                    09-APR-1997;
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                                                                                                                                                                                Tobin
                                                                                                                                                                                                                              (REGC ) UNIV CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
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90US-0586536.
91US-0716909.
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100.0%; pr
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 52;
Pred. No.
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0.015;
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                                                     Stiff man
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Claim

1:

Column

33;

61pp;

English.

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Sequence

20

B B

Length 20

This sequence represents a fragment of the glutamic acid decarboxylase 65 (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are available from natural sources.

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RESULT
Y59589
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Best Local Similarity
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This sequence represents a fragment of the glutamic acid decarboxylase (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosis is quite easy. It is also possible to obtain much
                                                                                                                                 Example 11;
                                                                                                                                                                   disorders
                                                                                                                                                                                                            WPI; 2000-095930/08
                                                                                                                                                                                                                                                                                                    07-JUN-1995;
21-SEP-1990;
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                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAD65; glutamic acid decarboxylase 65; autoimmune disorder; IDDM; insulin dependent diabetes mellitus; Stiff man disease; diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAD65 fragment,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Y59589;
                                                                                                                                                                                    Ameliorating
                                                                                                                                                                                                                                     Tobin
                                                                                                                                                                                                                                                             (REGC ) UNIV CALIFORNIA
                                                                                                                                                                                                                                                                                       18-JUN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Y59589 standard; peptide;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10;
                                                                                                                                                                     ing glutamic acid decarboxylase associated autoimmune such as insulin dependent diabetes mellitus and Stif
                                                                                                                                                                                                                                    Kaufman DL,
                                                                                                                                 Column 43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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90US-0586536.
91US-0716909.
                                                                                                                                                                                                                                                                                                                                         97US-0827618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptide #38
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                                                                                                                                 61pp; English.
                                                                                                                                                                                                                                    Erlander MG;
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Pred. No.
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0.015;
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                                                                                                                                                                      Stiff man
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R71643

R71643 standard;

Peptide;

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RESULT
R71643
ID R
XX
AC R
XX
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Matches 7
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Best Local Similarity
Matches 10; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             The peptide was synthesized based on the C-terminal sequence of human islet glutamic acid decarboxylase (GAD). It was used to raise antibody 1266 in rabbits, the antibody was used to test transfectants for production of human GAD by immunocytochemistry.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Polynucleotide encoding human islet glutamic acid decarboxylase used to test for auto-antibodies against itself to diagnose insulin dependent diabetes mellitus
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                                                                                                                                                                                                                                              12 THQDIDFLI 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11 ATHQDIDFLI 20
                                                                                                                                                                                                1 tqsdidfli 9
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                                                                                                                                                                                                                                                                                            Similarity
7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UNIV WASHINGTON ZYMOGENETICS IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 33; 45pp;
                                                                                                                                                                                                                                                                                                                                                                                                                       19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Grubin CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                       Æ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                   34.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hagopian W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                            Score 35; DB Pred. No. 11; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 52;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Karlsen AE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 21;
                                                                                                                                                                                                                                                                                                                                               13;
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                                                                                                                                                                                                                                                                                                                                             Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lernmark A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                O'Hara PJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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RESULT
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Best Local
                    03-OCT-1997;
                                        03-OCT-1997;
                                                           11-APR-2000
                                                                                                                                                                                                                                                                                                                                                                     Human islet cDNA (Q86046) was expressed in tk- ts13 BHK (ATCC CRL 1632). Transfectants were selected in methot medium. The immunoreactivity of the hunan GAD protein was tested using antibodies raised in rabbits against a peptide (R71643) of human GAD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Predicting the clinical course of diabetes in patients with non-insulin dependent diabetes mellitus - by detecting the presence of auto:antibodies to human islet cell glutamic ac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAD; glutamic-acid-decarboxylase; glutamate-decarboxylase;
non-insulin-dependent diabetes; NIDDM; diagnosis; autoantibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human GAD C-terminal
(UNBI-) UNITED BIOMEDICAL INC.
                                                                                US6048538-A.
                                                                                                                                                                      20-JUN-2000
                                                                                                                                                                                                            Y85070 standard;
                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hagopian W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9507464-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pancreas; islet
                                                                                                  Foot and
                                                                                                                                                 Immunogenic peptide #8 derived from FMDV non-structural protein 3C.
                                                                                                                                                                                                                                                                                                                                                                                                                               Example II; Page 26; 62pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UNIW ) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                   decarboxylase.
                                                                                                                                                                                                                                10
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                                                                                                                                                                                                                                                             1 tqsdidfli 9
                                                                                                                                                                                                                                                                               THODIDELI 20
                                                                                                                                                                                                                                                                                                   7; Conserv
                                                                                                                   mouth disease;
immunoreagent;
                                                                                                  mouth
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                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                      (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Karlsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WASHINGTON
                                                                                                                                                                                                                                                                                                                                                   AA;
                    97US-0943173.
                                       97US-0943173
                                                                                                  disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93US-0117907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94WO-US09937.
                                                                                                                                                                                                           peptide; 18
                                                                                                                                                                                                                                                                                                             34.0%;
77.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΑE,
                                                                                                   virus
                                                                                                                    FMDV; epitope; anti-FMDV antibody; diagnose non-structural protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Landin-Olsson M,
                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                             Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                             11;
                                                                                                                                                                                                                                                                                                                      16;
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                                                                                                                                                                                                                                                                                                    <u>ب</u>
                                                                                                                                                                                                                                                                                                                      Length 19;
                                                                                                                                                                                                                                                                                                                                                                                         s13 BHK cells
methotrexate
rotein obtained
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Best Local S
Matches 6
                                                 Introducing genes into eukaryotic cells using receptor binding regions - especially as part glyco-protein, used in gene therapy to ensure vectors to particular cell types
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence of the peptide corresponds to an immunodominant region of the FMDV non-structural protein and is an immunogenic epitope specific for anti-FMDV antibodies. The invention relates to peptides derived from three non-structural FMDV proteins. The peptides are useful as immunoreagents i.e. reagent in an immunoassay in detecting antibodies to FMDV or diagnosis of FMDV infection. The immunoassays are used to screen body fluids and tissues for the presence of FMDV-reactive antibodies and aid in the diagnosis of FMDV infection and differentiate infected from
                                                                                                                                                                                                                                                                                                                              Chimeric; polyproline; beta-turn helix; facilitation; inhibition; retrovirus; envelope glycoprotein; gene therapy; cystic fibrosis; myopathy; lysosomal disorder; cancer; human immunodeficiency virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Peptide from non-structural proteins useful for detecting foot-and-mouth disease virus infection in animal comprises immunogenic epitope specific to antibodies -
                          Example
                                                                                                                     WPI; 1998-018526/02.
                                                                                                                                            Cosset FL,
                                                                                                                                                                                                                     16-MAY-1997;
                                                                                                                                                                                                                                                   27-NOV-1997.
                                                                                                                                                                                                                                                                             W09744474-A2
                                                                                                                                                                                                                                                                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                   Spacer peptide for chimeric glycoprotein AMO-Delta-Pro2
                                                                                                                                                                                                                                                                                                                                                                                                               29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                         W44912;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence represents a peptide derived from the non-structural protein 3C of the foot and mouth disease virus (FMDV). The amino a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Column 25-26; 23pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-328034/28
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                                                                                                                                                                     (CNRS ) CENT
                                                                                                                                                                                                20-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                W44912 standard; peptide; 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the vaccinated animals.
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                          2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 42.9
6; Conservative
                          Page 40; 117pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18 AA;
                                                                                                                                             Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              De Chen
                                                                                                                                                                        NAT RECH SCI.
                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                96FR-0006234
                                                                                                                                                                                                                            97WO-FR00870
                                                                                                                                             SJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ρ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 33.0%;
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                                                                                                                                             Valsesia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 34; DB
Pred. No. 16;
4; Mismatches
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                                                             peptide with two of a viral precise targeting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
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A novel chimeric protein for gene transfer comprises, at the N-terminus,

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RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
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                                                                                                      Introducing genes into eukaryotic cells using peptide with two receptor binding regions - especially as part of a viral glyco-protein, used in gene therapy to ensure precise targeting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chimeric; polyproline; beta-turn helix; facilitation; inhibition; retrovirus; envelope glycoprotein; gene therapy; cystic fibrosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W44924;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   c-terminus, a
Example 3; Page 42; 117pp; French.
                                                                                                                                                                                                                                                             WPI; 1998-018526/02.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         myopathy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pro-rich spacer for chmeric envelope glycoprotein DeltaPro2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                         (CNRS ) CENT NAT RECH SCI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W09744474-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W44924 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human immunodeficiency virus) infections, etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 NPAATHQ 14
|||| ||
11 npaaphg 17
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6; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         lysosomal disorder;
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                                                                       particular cell
                                                                                                                                                                                                                                                                                                                                     Russell SJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a target molecule on the cell surface, and ond protein recognising a secondary target
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85
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                                                                                                                                                                                                                                                                                                                                     Valsesia
                                                                       types
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cein; gene therapy; cystic fibro
cancer; human immunodeficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
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                                                                                                             Of.
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A novel chimeric protein for gene transfer comprises, at the N-terminus, a protein binding a target molecule on the cell surface, and, at the C-terminus, a second protein recognising a secondary target molecule on the cell surface. The two domains are separated by a peptide comprising at least 30% Pro residues arranged so as to induce approximately 180 deg

Alginic acid Al-II-2 lyase has the N-terminal sequence R56619 and decomposes alginic acid into a sugar having a double bond between C and C5 and finally into 4-deoxy-5-ketouronic acid. The enzyme has optimal pH 8.0, optimal temp. 70 deg.C and mol.wt. 25000 and is useful for treating pulmonary cystic fibrosis caused by Pseudomonas

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Best Local S
Matches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Constructed and targeted to either the epidermal growth factor receptor (EGFR) or the major histocompatibility complex (MHC) class I receptor. Peptides W44923-W4492 are examples of the sper peptides used in the construction of the chimeric envelope glycoproteins. The pro-rich peptide acts by facilitating or inhibiting binding between the C-terminal protein and its receptor, and inhibition occurs as long as the N-terminal protein does not interact with its target. The recombinant (retro)viral particles are used for in vitro or ex vivo transfer of nucleic acid into target cells, especially for gene therapy, e.g. in cystic fibrosis, myopathy, lysosomal disorders, cancer, viral (especially human immunodeficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    regularly spread to form a polyproline beta-turn helix; whole construct especially forms part of a (retro)viral glycoprotein. A series of chimeric envelope glycoprotein.
   Claim 1;
                                           Alginic acid lyase(s) which decompose alginic acid into then 4-deoxy-5-keto:uronic acid - is used for treatment
                                                                                                                                                                                                                                                                                                                                                                           Alginic acid lyase; Al-II-2; 4-deoxy-5-ketonuric acid; pulmonary cystic fibrosis; Pseudomonas aeruginosa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                             pulmonary cystic fibrosis
                                                                                         WPI; 1994-268676/33
                                                                                                                                                                                                28-DEC-1992;
                                                                                                                                                                                                                                                          JP06197760-A.
                                                                                                                                                                                                                                                                                                     Key
Misc-difference
                                                                                                                                                                                                                                                                                                                                               Flavobacterium sp. OTC-6 (FERM P-12159).
                                                                                                                                                                                                                                                                                                                                                                                                                         Alginic acid Al-II-2 lyase N-terminal sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-MAR-1995 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R56619 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      virus) infections,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     folds (beta or reverse turns) in the peptide sequence,
                                                                                                                  (GNZE ) GUNZE KK.
(SAKB ) OTSUKA KAGAKU YAKUHIN KK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
nes 6; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12 npaaphq 18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 NPAATHQ 14
Page 9; llpp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                    92JP-0348465
                                                                                                                                                                                               92JP-0348465.
                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                        /note= "not defined"
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85.7%;
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Pred. No.
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25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       beta-turn helix structure.
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                                               sugar
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Sequence

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RESULT 15
R67426
ID R67426
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Best Local Similarity
""" 6; Conserv:
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                                                                                                                                      RESULT
R61238
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                                                                                        Query Match
Best Local Similarity
Matches 6; Conserv
                                                                                                                                                     This sequences represents the N-terminal fragment of alginate lyase II. Alginate lyase I and II (Al-I and Al-III) have molecular weights of 60 and 38 kb. The alginate lyases break down alginic acid or viscous substances formed by cystic fibrosis sufferers.
                                                                                                                                                                                                                                                                                               (GNZE )
                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-terminal; alginate cystic fibrosis.
       R67426 standard;
                                                                                                                                                                                                                                                                   Abe S, Hisano T,
Okayama K, Yamagu
                                                                                                                                     Sequence
                                                                                                                                                                                                   Disclosure; Page 25; 36pp; Japanese.
                                                                                                                                                                                                                    New alginate lyase from Pseudomonas treatment of cystic fibrosis
                                                                                                                                                                                                                                                  WPI; 1994-293999/36
                                                                                                                                                                                                                                                                                                                           24-FEB-1993;
                                                                                                                                                                                                                                                                                                                                            24-FEB-1993;
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                                                                                                                                                                                                                                                                                                                                                                                                                                      Pseudomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alginate lyase II N-terminal sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R61238;
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                                                      paaahssid 10
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OTSUKA KAGAKU KK.
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                                                                                                                                                                                                                                                                   no T, Kimura
Yamaguchi H,
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                                                                                        Conservative
                                                                                                                                     AA;
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                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                   /label- Undefined amino acid
       Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32.0%;
                                                                                                  32.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                lyase; Al-I; Al-III; enzyme;
        20
                                                                                                                                                                                                                                                                    A, Murata K,
Yamashita T,
                                                                                        Score 33; DB
Pred. No. 27;
0; Mismatches
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A
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Pred. No. 27;
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27;
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                                                                                                                                                                                                                                                                   Nishimura M;
Yonemoto Y;
                                                                                                                                                                                                                                useful for the
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                                                                                                        Length 20;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                alginic acid;
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                                                                                         Indels
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RESULT
R56620
ID R56
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Best Local Similarity
"-+-hes 6; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alginic acid lyase expression gene - used in the prepnalginic acid lyase \begin{tabular}{ll} \begin{tabu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   alginic acid lyase;
N-terminal fragment.
                                        28-DEC-1992;
                                                                                         19-JUL-1994.
                                                                                                                                                                                                                                   Alginic acid lyase; Al-III; 4-deoxy-5-ketonuric acid; pulmonary cystic fibrosis; Pseudomonas aeruginosa.
                                                                                                                                                                                                                                                                                                                                                             24-MAR-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1995-040321/06
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                                                                                                                                         JP06197760-A.
                                                                                                                                                                                     Flavobacterium sp.
                                                                                                                                                                                                                                                                                                             Alginic acid Al-III lyase N-terminal sequence
                                                                                                                                                                                                                                                                                                                                                                                                              R56620;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         R56620 standard; peptide;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GNZE ) GUNZE KK.
(SAKB ) OTSUKA KAGAKU YAKUHIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22-NOV-1994.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9 PAATHQDID 17
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                                                                                                                                                                                                                                                                                                                                                             (first entry)
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                                           92JP-0348465
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                                                                                                                                                                                          OTC-6 (FERM P-12159).
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Pred. No.
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27;
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RESULT
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
         The sequences given in R61236-37 represent the N-terminal fragments of alginate lyase I and III (Al-I and Al-III), respectively. These enzymes have molecular weights of 60 and 38 kb. The alginate lyases break down alginic acid or viscous substances formed by cystic fibrosis sufferers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alginic acid Al-III lyase has the N-terminal sequence R56620 and decomposes alginic acid into a sugar having a double bond between C and C5 and finally into 4-deoxy-5-ketourconic acid. The enzyme has optimal pH 8.0, optimal temp. 70 deg.C and mol.wt. 38000 and is useful for treating pulmonary cystic fibrosis caused by Pseudomonas acruitnosa.
                                                                           Claim
                                                                                              New alginate lyase from 'Pseudomonas treatment of cystic fibrosis
                                                                                                                                WPI; 1994-293999/36
                                                                                                                                                                                    (GNZE )
(SAKB )
                                                                                                                                                                                                                                                                01-SEP-1994.
                                                                                                                                                                                                                                                                                      WO9419006-A
                                                                                                                                                                                                                                                                                                                               N-terminal; alginate cystic fibrosis.
                                                                                                                                                                                                                                                                                                                                                                Alginate lyase I N-terminal sequence
                                                                                                                                                                                                                                                                                                                                                                                                            R61236;
                                                                                                                                                                                                                                                                                                                                                                                                                               R61236 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aeruginosa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 2; Page 9; llpp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alginic acid lyase(s) which decompose alginic acid into sugar and then 4-deoxy-5-keto:uronic acid - is used for treatment of pulmonary cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GNZE
                                                                                                                                                               Abe S,
                                                                                                                                                                                                                     24-FEB-1993;
                                                                                                                                                                                                                                          24-FEB-1993;
                                                                                                                                                                                                                                                                                                         Pseudomonas sp
                                                                                                                                                                                                                                                                                                                                                                                      27-APR-1995
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les 5; Conserv
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fdqavvkdptasyvdv 18
                                                                           <u>2</u>,
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OTSUKA KAGAKU YAKUHIN KK.
                                                                                                                                                                                    GUNZE LTD.
OTSUKA KAGAKU KK.
                                                                                                                                                   Hisano T, Kimura A, Murata K, K, Yamaguchi H, Yamashita T,
                                                                      Page 24; 36pp; Japanese.
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                                                                                                                                                                                                                                                                                                                                                                                                                               peptide;
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                                                                                                                                                                                                                                                                                                                                          lyase;
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                                                                                                                                                                                                                                                                                                                                          Al-I; Al-III; enzyme; alginic acid;
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Pred. No.
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                                                                                                                                                    Nishimura M;
Yonemoto Y;
                                                                                                           useful
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RESULT
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Best Local S
Matches 5
                                                                                                                                                                        The sequences given in R61236-37 represent the N-terminal fragments of alginate lyase I and III (Al-I and Al-III), respectively. These enzymes have molecular weights of 60 and 38 kD. The alginate lyases break down alginic acid or viscous substances formed by
                                                                                                                                                                                                                                                                                                                                                                                                                                N-terminal; alginate cystic fibrosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R61237 standard;
R67427;
                 R67427 standard;
                                                                                                                                              Sequence
                                                                                                                                                                cystic fibrosis sufferers.
                                                                                                                                                                                                                    Claim 4; Page 24-25; 36pp; Japanese.
                                                                                                                                                                                                                                      New alginate lyase from Pseudomonas treatment of cystic fibrosis
                                                                                                                                                                                                                                                                                   Okayama
                                                                                                                                                                                                                                                                                                                                         24-FEB-1993;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alginate lyase III N-terminal sequence.
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(SAKB ) OTSUKA KAGAKU KK.
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                                                                                FFRMVISNPAATHQDI
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5; Conserv
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K. Yamaguchi H,
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                                                                                                                                                                                                                                                                                ¥amaguchi
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                                                                                                   Conservative
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                 Peptide;
                                                                                                           31.1%; 31.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                          lyase; Al-I; Al-III;
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Yamashita T
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Pred. No.
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                  B
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Pred. No. 39;
                                                                                                    Mismatches
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31-AUG-1995

(first entry)

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Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                        Principle neutralising domain; PND; HIV-1; gp120; envelope; vaccine; prophylaxis.
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                         WPI; 1992-315940/38
                                                                        Murray MG, Putney SD;
                                                                                                                                                                          14-FEB-1991;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HIV epitope #13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R26891;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1995-040321/06
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                                                                                                                         (REPK ) REPLIGEN CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-NOV-1994
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fdqavvkdptasyvdv 18
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OTSUKA KAGAKU YAKUHIN
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5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
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Pred. No. 39;
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                                 The sequences given in R26879-93 are portions of the HTV-1 principle neutralising domain (PND) protein which were used as neutralising epitopes. HIV-1 PND is an approx. 40 amino acid region of the external envelope protein gpl20 which forms a looped structure in native gpl20. The epitopes were inserted into the BC loop of a hybrid pollovirus. This construct could be used as a vaccine. The vaccine may be used for prophylaxis or treatment of human patients infected
                                                                                                                                                                            Hybrid pollo virus useful as vaccine against HIV-1 infections contains epitope of heterologous protein inserted into the BC loop of pollo virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The sequences given in R26879-93 are portions of the HIV-1 principle neutralising domain (PND) protein which were used as neutralising epitopes. HIV-1 PND is an approx. 40 amino acid region of the external envelope protein gpl20 which forms a looped structure in native gpl20. The epitopes were inserted into the BC loop of a hybrid pollovirus. This construct could be used as a vaccine. The vaccine may be used for prophylaxis or treatment of human patients infected
                                                                                                                                                  Disclosure; Page 19; 35pp; English.
                                                                                                                                                                                                                                   WPI; 1992-315940/38.
                                                                                                                                                                                                                                                             Murray MG, Putney SD
                                                                                                                                                                                                                                                                                                                                               14-FEB-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
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55.6%;
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Best Local Similarity
""" bes 5; Conserv
XAXEX
                                                                                                                                             Query Match
Best Local S
Matches 6
         11-FEB-1999
                              W87486;
                                                                                                                                                                                                                                                                                                                                 Monoclonal antibodies to somatotropin binding protein in - do not bind to receptor and can be used alone, or with somatotropin to potentiate growth as well as in assays.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C-terminal of somatotropin binding protein.
                                                   W87486 standard;
                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                    The C-terminal of mouse SBP was prepared by solid phase peptide synthesis with the addition of Cys residue for coupling to an antigenic carrier protein. The conjugate was then used to raise
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                                                                                                                                                                                                                                                                                                              Disclosure;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R13289 standard;
                                                                                                                                                                                                                   binding protein and receptors.
See also R13288.
                                                                                                                                                                                                                                       with somatotropin to animals. It can also
                                                                                                                                                                                                                                                                                                                                                                                                                 (AMCY ) AMERICAN CYANAMID CO
                                                                                                                                             Local Similarity
les 6; Conserv
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                                                                                                                         7 SNPAATHODID 17
                                                                                                                                                                                                                                               GHBP 4.3 which can be used to enhance animal growth or used h somatotropin to potentiate the effect of somatotropin in
                                                                                                    snsqhphqeid 14
                                                                                                                                                                                                                                       It can also be used to distinguish between somatotropin
                                                                                                                                                                                                 17 AA;
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                                                                                                                                              Conservative
        (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                              Wang BS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GHBP; monoclonal antibodies; epitope
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                                                 peptide; 17 AA
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                                                                                                                                                       29.18;
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Pred. No.
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7 SNPAATHQDIDFL 19 sntaatnadcawl 15

Query Match
Best Local Similarity
Matches 7; Conser

Conservative

29.1%; 53.8%;

Score 30; DB Pred. No. 72; 2; Mismatches

рв 72; 19;

Length 17; Indels

0

Gaps

0

RESULT

24

XXXX

R66373 standard; peptide; 18 AA

Chlamydial epitope; variable domain; MOMP;

Chlamydial MOMP VDI epitope.

27-JUN-1995 R66373;

(first entry)

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W87481 to W87486 represent human immunodeficiency virus-1 (HIV-1) CC sequences in MO/LAI cells that were used for comparing the mutant amino CC acid sequences of the defective HIV provirus in L-2 cells. V71858 to CC V71863 represent the portions of pol protease (prot.), vpr, env (9p120 CC and 9p41), and nef gene regions that were mutated as compared to wild-CC type HIV-1 in LAI or MO/LAI cells. The invention relates to mutated CC DNA, proteins or fragments of defective HIV-1 provirus in L-2 cell line. CC The mutations result in non-infectious HIV-1 particles. Inactive, CC protease-deficient HIV-1 particles containing at least one of Nef CC reducing or preventing apoptosis in HIV-1 sero-negative or -positive CC subjects, specifically those with HIV-1 infection, both for prevention CC and treatment. Fragments of nef gene and fragments encoding specific mutant Nef proteins are also useful in hybridisation tests for diagnostic detection of mutated genes in (lysed) cells or body fluids, while the C corresponding mutant proteins are detected in immunoassays using CC antibodies. The protease-deficient HIV-1 particles and antibodies, CC contionally attached to a radioisotope, chemotherapeutic agent or toxin, CC can be used to reduce the severity of HIV infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New nucleic acid encoding mutant or truncated forms of human immune deficiency virus proteins - used to generate non-infectious particles useful as therapeutic or prophylactic immunogens, also for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human immunodeficiency virus-1; HIV-1; protease; provirus; L-2 cell; mutation; Nef protein; immunogen; apoptosis; treatment; hybridisation; cell lysis; chemotherapeutic; toxin; HIV infection; MO/LAI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HIV-1 MO/LAI Nef protein amino acid fragment
  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-568304/48.
N-PSDB; V71869.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fig 1;
  17
AA;
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RESULT
R66374
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  major outer diagnostic;
                                                                                                                                                                                                                                         Chlamydial epitope; variable domain; MOMP; major outer membrane protein; picornavirus; diagnostic; therapeutic; capsid protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New hybrid picornaviruses expressing chlamydial epitopes to develop prods. for vaccination, diagnosis, treatment of chlamydial infections and prodn. of immunological reagents
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                                                                                                                     24-NOV-1994
                                                                                                                                                            WO9426900-A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1995-006796/01.
(CONN-) CONNAUGHT LAB LTD
                                      13-MAY-1993;
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. 77;
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Search completed: February Job time: 630 sec
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Matches 5
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                                                                                                                                                                                                                                                                                                                                                                                                                                  New hybrid picornaviruses expressing chlamydial epitopes to develop prods. for vaccination, diagnosis, treatment of chlamydial infections and prodn. of immunological reagents
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                                                                                                                                                                                                                                                                                                             sp_plant:*
sp_rodent:*
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24.999 Million cell updates/sec
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                              085712 rous sarcom
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Q9s8j0 bryonia dio
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œ	O99728 buteo jamai	O99724 dryoscopus	O31045 streptomyce	Q9myt7 sus scrofa	Q9wmg5 sigma virus	Q9ts01 bos taurus		homo sap	3 ratt	Q9uca0 homo sapien	Q14009 homo sapien	Q9sap8 pisum sativ	Q9t2j7 pisum sativ	Q9twn0 macrobdella	Q94374 caenorhabd1	Q94369 caenorhabdi	O52388 anabaena	Q9r1h1 rattus r	mus mus	rat	Q9umm9 homo sapien	homo	Q9tu55 cebus apell	caeno	Q9trc6 canis fami
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#### ALIGNMENTS

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Q85712;
Q1-NOV-1996
Q1-NOV-1996
Q1-NOV-1998
 O9TJ56; PRELIMINARY; PRT; 23 AA.
09TJ56; O1-MAY-2000 (TIEMBLIEL. 13, Created)
01-MAY-2000 (TIEMBLIEL. 13, Last sequence update)
01-MAY-2000 (TIEMBLIEL. 13, Last annotation update)
P700 APOPROTEIN IB (FRAGMENT).
PSAB.
                                                                                                                                                                                                                                                                                      *DNA sequence of the Bryan high-titer strain of Rous sarcoma virus: extent of env deletion and possible genealogical relationship with other viral strains.", J. virol. 49:549-556(1984).
EMBL; K03366; AAA42559.1; ...
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01.NOV-1996 (TIEMBLIFEL. 01, Last sequence update)
01.NOV-1998 (TIEMBLIFEL. 08, Last annotation update)
(BRYAN HIGH-TITER STRAIN) SRC (FRAGMENT).
                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
MEDLINE-84115080; PubMed-6319754;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rous sarcoma virus.
                                                                                                                                                                                                                                                                                                                                                                        erner T.L., Hanafusa H.;
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53.8%;
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Pred, No. 2e+02;
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Q9TJ52;
Q9TJ52;
01-MAY-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Suyama Y., Tsumura Y., Yoshimaru "Molecular phylogenetic position chloroplast DNA sequences."; Submitted (JUL-199) to the EMBL, AB029671; BAA87994.1; -.
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Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Eukaryota; Coniferales; Pinaceae; Abies.
NCBI_TaxID-97166;
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Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
                Chloroplast
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Eukaryota; Viridiplantae; Embryophyta;
Coniferopsida; Coniferales; Pinaceae; A
NCBI_TaxID-97167;
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Submitted (JUL-1999) to the
EMBL; AB029670; BAA87992.1;
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TEIN IB (FRAGMENT).
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"Molecular phylogenetic position of Japanese F
chloroplast DNA sequences.";

Submitted (JUL-1999) to the EMBL/GenBank/DDBJ
EMBL, AB029675; BAA88002.1; -.
                                                                           Chloroplast.
Eukaryota; Viridiplantae; Ei
Coniferopsida; Coniferales;
NCBI_TaxID=97170;
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Coniferopsida; Coniferales;
NCBI_TaxID=78261;
                       SEQUENCE FROM N.A. Suyama Y., Tsumura
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Chloroplast.
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                         Tsumura Y.,
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s; Pinaceae; I
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s; Pinaceae;
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Pred. No. 2.56
4; Mismatches
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Q9TJ42;
Q9TJ42;
01-MAY-2000 (TrEMBLrel. 13, Cres
01-MAY-2000 (TrEMBLrel. 13, Last
01-MAY-2000 (TrEMBLrel. 13, Last
P700 APOPROTEIN IB (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chloroplast DNA sequences.";
Submitted (JUL-1999) to the EL
*EMBL; AB029676; BAA88004.1; -
Chloroplast.
NON_TER
1 1
SEQUENCE 23 AA; 2485 MW;
                                                                                                                                                                                                                                                                                  Q9TJ40;
Q9TJ40;
Q1-MAY-2000
Q1-MAY-2000
Q1-MAY-2000
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Eukaryota; Viridiplantae; Em
Euraryota; Coniferales;
Suyama Y., Tsumura Y., Yoshi

"Molecular phylogenetic post

chloropiast DNA sequences.";

submitted (JUL-1999) to the

EMBL; AB029678; BAA88008.1;
                                                                                                                                                            Chloroplast.
Eukaryota; Viridiplantae;
Coniferopsida; Coniferale;
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01-MAY-2000 (TIEMBLITEL 13, La:
01-MAY-2000 (TIEMBLITEL 13, La:
P700 APOPROTEIN IB (FRAGMENT).
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                                                                                                                                           NCBI_TaxID=78263;
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                    EMBL/GenBank/DDBJ
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Pred. No. 2.5e
4; Mismatches
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Abies.
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                                                                             SEQUENCE FROM N.A. Y., Yoshim Suyama Y., Tsumura Y., Yoshim "Molecular phylogenetic posit chloroplast DNA seguences."; Submitted (JUL-1999) to the ENBL; AB029680; BAA88012.1; -
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09TJ36;
01-MAY-2000
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Q9TJ38;
Q1-MAY-2000
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SEQUENCE 2:
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Eukaryota; Viridiplantae; Embryophyta;
Coniferopsida; Coniferales; Pinaceae;
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     SEQUENCE
                                                         Chloroplast.
                                                                                                                                                                                                                                                                                NCBI_TaxID=78264;
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33.3%;
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Pred. No. 2.5e
4; Mismatches
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Pred. No. 2.5e
4; Mismatches
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C19201F5B9BE67C8 CRC64;
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of Japanese Abies (Pinaceae)
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2.5e+02;
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Q9TJ34;
Q1-MAY-2000
Q1-MAY-2000
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01-MAY-2000
01-MAY-2000
                                                                                                                                                                                                                                                                                                                              Chloroplast.
NON_TER
SEQUENCE 23
NON_TER
                         "Nolecular phylogenetic position chloroplast DNA sequences.";
Submitted (JUL-1999) to the EMBL, AB029682; BAA88016.1; -.
                                                                                         Abies veitchii.
Chloroplast.
Chloroplast.
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta;
Coniferopsida; Coniferales; Pinaceae; Abies.
NCBI_TaxID=78262;
                                                                                                                                                                                     Q9TJ32
Q9TJ32;
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Chloroplast.
Endaryota; Viridiplantae; En
Coniferopsida; Coniferales;
NCBI_TaxID-97169;
                  Chloroplast.
                                                                         SEQUENCE FROM N.A.
                                                                                                                                                 P700 APOPROTEIN
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AY-2000 (TrEMBLrel. 13, Last sequence update)
AY-2000 (TREMBLrel. 13, Last annotation update)
APOPROTEIN IB (FRAGMENT).
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6; Conservative
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(TIEMBLIel. 13, Last annotation update)
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                                    EMBL/GenBank/DDBJ
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Q15988;
01-NOV-1996 (TIEMBLITEL 0
01-NOV-1996 (TIEMBLITEL 0
01-MAY-1999 (TIEMBLITEL 1
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01-JUL-1997 (TrEMBLrel. 04, Created)
01-JUL-1997 (TrEMBLrel. 04, Last sequence update)
01-JUL-1997 (TrEMBLrel. 04, Last annotation update)
01-JUL-1997 (TrEMBLrel. 04, Last annotation update)
HYPOTHETICAL 2.6 KDA PROTEIN.
Mycobacterium tuberculosis, and Mycobacterium bovis BCG.
Bacteria; Filmicutes; Actinobacteria; Actinobacteriae;
                                                                                                                                                                                                chromosome 1q.";

Genomics 15:357-364(1993).

EMBL; S56767; AAD13883.1;

NON_TER 1

SEQUENCE 20 AA; 2012 MW
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SEQUENCE 25 AA; 2639 MW; 036E7271A33D1CF2
                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (Human).
Eukaryota; Metazoa; C
Mammalia; Eutheria; P
                                                                                                                                                                                                                                                                                                         MEDLINE-93194183; PubMed-8095486;
Nishimura D.Y., Purchio A.F., Mur
"Linkage localization of TGFB2 an
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NCBI_TaxID=1773, 33892;
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STRAIN=2296207, AND PASTEUR;
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4 PACDGER 20
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| PAADGEQ 13
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Primates;
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the EMBL/GenBank/DDBJ databases
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Pred. No. 2.8e
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4; Mismatches 8;
                                                                                     Score 29; DB 4;
Pred. No. 3.2e+02;
1; Mismatches 1
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2 and the human
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2.8e+02;
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J. Clin. Microbiol. 35:2087
EMBL; 096732; ABB65632.1;
INTERPRO; IPRO01476;
PFAM; PF00166; cpn10; 1.
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034195;
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01-JAN-1998
01-MAY-2000
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Q85713;
01-NOV-1996
01-NOV-1996
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SEQUENCE
                                                                                                                                                                                                                                 J. Virol
EMBL; M1
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"Partial nucleotide sequence of Rous sarcoma virus-29 provides
evidence that the original Rous sarcoma virus was replication
defective.";
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                                                                                                                                                                                                                                                                                                                                                                                                                         Viruses; Retroid viruses; Retroviridae; RCBI_TaxID-11886;
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"PCR amplification and comparison of nucleotide sequences from groESL heat shock operon of Ehrlichia species.";
J. Clin. Microbiol. 35:2087-2092(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bacteria;
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                                                                                                                                                                                                                                 M11117; AAA42556.1; -
                                                                                    Similarity
5; Conserv
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Similarity 27.8%;
5; Conservative
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Pred. No.
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3.5e+02;
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Q9TRC6;
Q1-MAY-2000
01-MAY-2000
01-JUN-2000
                                                                   Q94377;
01-FEB-1997
01-FEB-1997
01-MAY-2000
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01-MAY-2000 (TIEMBLrel. 13, Last sequence update)
01-JUN-2000 (TIEMBLrel. 14, Last annotation updat
CYTOCHROME P450 DPB-1 ISOFORM (FRAGMENT).
Canis familiaris (Dog).
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O9S8J0
OPRELIMINARY; PRT; 21 AA.
O9S8J0;
O1-MAY-2000 (TrEMBLrel. 13, Created)
O1-MAY-2000 (TrEMBLrel. 13, Last sequence update)
O1-JUN-2000 (TREMBLREL. 14, Last annotation update)
O1-JUN-2000 (TREMBLREL. 14, Last annotation update)
O1-JUN-2000 (TREMBLREL. 14, Last annotation update)
Typonia dioica (Red bryony).
Bryonia dioica (Red bryony).
Bryonia dioica (Red bryony).
Bryonia dioica (Red bryony).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Isolation and characterization of four cytochrome untreated and phenobarbital treated beagle dogs."; Biol. Pharm. Bull. 17:22-28(1994).
SEQUENCE 23 AA; 2638 MW; AF86888FEF8029F8 CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=94198820; PubMed=8185738;
Shiraga T., Iwasaki K., Nozaki K.,
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   Caenorhabditis elegans
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Bioconjug. Chem. 5:423-429(1994).
SEQUENCE 21 AA; 2302 MW; 54ED5E00AD12787B CRC64;
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Siegall C.B., Gawlak S.L., Chace D., Wolff
Marquardt H.;
"Characterization of ribosome-inactivating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Magnoliophyta; eudicotyledons; core e Cucurbitales; Cucurbitaceae; Bryonia.
                                        PP1-LIKE
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lons; core eudicots; Rosidae; eurosids I;
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Pred. No.
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Pred. No. 5e+C
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                                     (FRAGMENT).
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5.5e+02;
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EMBL; AR135470; AAF09181.1; -.
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                                     Homo sapiens (Human).
Eukaryota; Metazoa; C
Mammalia; Eutheria; P
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Zeke T., Gergely P., Dombrad
Submitted (JUL-1996) to the
EMBL; 277740; CAB01299.1; -.
HSSP, P08129, 1FJM.
NCBI_TaxID=9606; [1]
                                                                                                   HLA DQA1
                                                                                                                      HUMAN LEUKOCYTE
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Eukaryota; Metazoa; Chordata; Craniat
Mammalia; Eutheria; Primates; Platyrr
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Rhabditidae; Peloderinae; Caer
NCBI_TaxID=6239;
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Q9QVG0;
Q1-MAY-2000 (TrEMBLrel. 13, Created)
Q1-MAY-2000 (TrEMBLrel. 13, Last sequence update)
Q1-MAY-2000 (TrEMBLrel. 13, Last annotation update)
CLEAVED PROLACTIN-1, CLPRL-1-FRAGMENT A.
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MEDLINE-95064785; PubMed-7974465;

Fogdell A., Olerup O.;

The DQA1*0104 allele is carried by DRB1*1001- and DRB1*1401-positive haplotypes in Caucasians, Africans and Orientals.";

Tissue Antigens 44:19-24(1994).

EMBL; S75685; AAB32621.1; -.

INTERPRO; IPR001003; -. URC FF SIGNE. 1
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MEDILINE-91123474; PubMed-1840604;
ItO M., Mori Y., Olso Y., Saito H.;

"A single base substitution in the coding associated with familial central diabetes J. Clin. Invest. 87:725-728(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID-9606;
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MEDLINE-92143803; PubMed-1736889;
Andries M., Tilemans D., Denef C.;
"Isolation of cleaved prolactin variants that stimulate DNA synthesis
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ER 19 19
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Rodentia;
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Pred. No.
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Pred. No.
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                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
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9.6e+02;
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6;
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insipidus.";
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                                        Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                  in specific cell types in rat pituitary cell aggregates in culture."; Biochem. J. 281:393-400(1992).
SEQUENCE 20 AA; 2146 MW; 89CA019A7668CBBA CRC64;
                     13 LPACDG 18
1 LPVCSG
σ
                                            Conservative
                                                     23.6%;
                                            0;
                                                     Score 26; DB 11;
Pred. No. 1e+03;
                                           Mismatches
                                             2
                                                              Length
                                             Indels
                                                                   20;
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0

Search completed: February 5, 2001, 10:55:20 Job time: 909 sec

}> k√

GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.

OM protein - protein search, using sw model

Run on: February 5, 2001, 10:37:07; Search time 58.67 Seconds (without alignments) 23.147 Million cell updates/sec

Title: Perfect score: Sequence: US-08-981-824-1 110

1 DVNYAFLHATDLLPACDGER 20

Scoring table: BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched:

Total number of hits satisfying chosen parameters:

5001

195891 seqs, 67900655 residues

Minimum DB seq length: 0 Maximum DB seq length: 25

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

PIR\_66:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

29	28	27	26	25	24	23	22	21.	. 20	19	18	17	16	15	14	13	12	11	10	9	8	7	o	UI	4	ω	N	1		Result
23	23	23	23	23	24	24	24	24	24	24	24	24	24	25	25	25	25	25	25	25	26	26	26	26	28	28	29	31		Score
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albumin - rat (fra		heat-stable entero	neomyosuppressin -	cardioexcitatory n	phosphoprotein pho	paralytic peptide		dissimilatory sulf		heat-stable entero	heat-stable entero	bleomycin-binding	l-specif:	spore storage prot	hypothetical prote	Ser/Thr protein ph	glycine reductase	ဂ Pe	translation initia	insulin-like growt	protein phosphatas	phosphoprotein pho	hydrogenase (EC 1.	eukocyte	<ul> <li>Ser/Thr protein ph</li> </ul>	ä	hain V-E	alpha-amylase inhi		Description

δõ 밁

5 AFLHATDLLPACDG 18 | | || : | | | 2 ARLRATIVTPICYG 15

Query Match 26.4%; Best Local Similarity 50.0%; Matches "7; Conservative

Score 29; DB 2; Length 16; Pred. No. 1.7e+02; 1; Mismatches 6; Indels

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21 21	222	222	222 222	222	23 23
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S01122 S01119	T42378 S20257 B49164	EWSMAN D34047 B42382	S55312 JQ2310 JQ2320	S16204 PL0040 S30608	T42256 I54750
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## ALIGNMENTS

RESULT 2 PH1640  Ig H chain V-D-J region (clone B-less 235) - mouse (fragment) C;Species: Mus musculus (house mouse) C;Date: 02-Jun-1994 #sequence_revision 02-Jun-1994 #text_change 17-Mar-1999 C;Accession: PH1640 R;Levinson, D.A.; Campos-Torres, J.; Leder, P. J. Exp. Med. 178, 317-329, 1993 A;Title: Molecular characterization of transgene-induced immunodeficiency in B-less m A;Reference number: PH1580; MUID:93301609 A;Accession: PH1640 A;Molecule type: DNA A;Residues: 1-16 <lev> A;Exporimental source: bone marrow pre-B lymphocyte C;Keywords: immunoglobulin</lev>	Query Match 28.2%; Score 31; DB 2; Length 25; Best Local Similarity 71.4%; Pred. No. 1.3e+02; Matches 5; Conservative 1; Mismatches 1; Indels 0; Gaps 0; Qy 10 TDLLPAC 16  :       Db 12 TBLLPHC 18	R; Kobrehel, K.; Alary, R.  J. Scl. Food Agric. 48, 441-452, 1989  A; Title: Isolation and partial characterisation of two low molecular weight durum whe A; Title: Isolation and partial characterisation of two low molecular weight durum whe A; Title: Isolation and partial characterisation of two low molecular weight durum whe A; Title: Isolation isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolation isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molecular weight durum whe A; Title: Isolated and partial characterisation of two low molec	RESULT 1 \$10850 alpha-amylase inhibitor - durum wheat (fragment) alpha-amylase inhibitor - durum wheat (fragment) N;Alternate names: glutenin low molecular weight chain C;Species: Triticum durum (durum wheat) C;Species: 19-Mar-1997 #sequence_revision 29-Aug-1997 #text_change 29-Aug-1997 C;Date: 19-Mar-1997 #sequence_revision 29-Aug-1997 #text_change 29-Aug-1997

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estrogen receptor - pig (fragments)
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 04-Dec-1992 #sequence_revision 04-Dec-1992 #text_change 30-May-1997
C;Accession: S15861
R;Thole, H.H.; Jungblut, P.W.; Jakob, F.
Biochem. J. 276, 709-714, 1991
A;Title: The proton-driven dissociation of oestradiol-receptor dimers as a page of the proton of the proton dimers as a page of the proton of the proton dimers as a page of the proton of the proton dimers as a page of the proton of the proton dimers as a page of the proton of the proton dimers as a page of the proton of the proton dimers as a page of the proton of the proton dimers as a page of the proton of the proton dimers as a page of the proton of the prot
                                                                                                                                                                                                                                                              R:Fogdell, A.; Olerup, O.
Tissue Antigens 44, 19-24, 1994
A:Title: The DQA1*0104 allele is carried by DRB1*1001-
A;Reference number: I59649; MUID:95064785
A;Accession: I59649
                                                                                                                                                                                                                                                                                                                                                                                                                                                         human leukocyte antigen alpha chain - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 05-Nov-1999
C;Accession: I59649
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A;Accession: S15861
A;Molecule type: protein
A;Residues: 1-20 <BIO>
C;Keywords: steroid hormone receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: EMBL:277740; PIDN:CAB01299.1
A;Experimental source: strain Bristol; clone C-1
C;Superfamily: phosphoprotein phosphatase; phosphoesterase core homology; phosphoprotei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             submitted to the EMBL Data Library, July 1996
A;Description: The catalytic subunits of Ser/Thr protein phosphatases from Caenorhabdit:
A;Reference number: Z22025
A;Accession: T42014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C:Accession: T42014
R:Zeke, T.; Gergely, P.; Dombradi, V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ser/Thr protein phosphatase, PP1-like - Caenorhabditis elegans (fragment)
C; Species: Caenorhabditis elegans
C; Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 02-Jun-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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S15861
                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-18 < RES>
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A;Molecule type: DNA
A;Residues: 1-24 <ZEK>
A;Cross-references: GDB:120638; OMIM:146880
                                       A; Gene: GDB: HLA-DQA1
                                                                           C; Genetics:
                                                                                                               A;Cross-references: GB:S75685; NID:g913771; PIDN:AAB32621.1;
                                                                                                                                                                                                                          A; Status: preliminary; translated from GB/EMBL/DDBJ
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Pred. No. 3.8e+02;
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Pred. No. 3.2e+02;
2; Mismatches 1
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protein phosphatase - Caenorhabditis elegans (fragment) C;Species: Caenorhabditis elegans C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #tex C;Accession: T42441 R;Zeke, T.; Gergely, P.; Dombradi, V.
                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: EMBL:Z77735; PIDN:CAB01294.1
C;Superfamily: phosphoprotein phosphatase; phosp
C;Keywords: phosphoric monoester hydrolase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Zeke, T.; Gergely, P.; Dombradi, V. submitted to the EMBL Data Library, July 1996 A;Description: The catalytic subunits of Ser/Thr protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      phosphoprotein phosphatase (EC 3.1.3.16) - Caenorhabditis elegans (fragment) C;Species: Caenorhabditis elegans C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 02-Jun-2000 C;Accession: T42257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: protein A; Residues: 1-19 <PRI> C; Keywords: oxidoreductase
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R;Pr1ckril, B.C.; He, S.H.; L1, C.; Menon, N.; Choi, E.S.;
Biochem. Biophys. Res. Commun. 149, 369-377, 1987

A;Title: Identification of three classes of hydrogenase in A;Reference number: A27480; MUID:88106446

A;Accession: H27480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hydrogenase (EC 1.18.99.1) large chain - Desulfovibrio baculatus (strain Norway N;Alternate names: hydrogenlyase; NiFeSe hydrogenase C;Species: Desulfovibrio baculatus C;Species: Desulfovibrio baculatus C;Date: 08-Mar-1989 #sequence_revision 08-Mar-1989 #text_change 30-Sep-1993
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A; Residues: 1-24 <ZEK>
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A; Accession: T42257
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0; Mismatches
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                                          03-Dec-1999 #text_change
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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-24 <ZEK>
A;Cross-references: EMBL:Z77729; PIDN:CAB01288.1
C;Superfamily: phosphoprotein phosphatase; phosphoesterase core homology; phosphoproteir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Description: Conservation of a methylation imprint and a putative imprinting box at A;Accession: S58277
A;A;Accession: S58277
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C;Species: Homo sapiens (man)
C;Date: 13-Jan-1996 #sequence_revision 01-Mar-1996 #text_change 05-Nov-1999
C;Accession: S58277
R;Smrzka, O.W.; Stoger, R.; Kurzbauer, R.; Fae, I.; Fischer, G.F.; Barlow, I.
 В
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                                                                                                                                                                                                     A; Title: The amino acid sequence of eukaryotic A; Reference number: S65884; MUID:95293122 A; Accession: S65884
                                                                                                                                                                                                                                                                                                        translation initiation factor eIF-1 - rabbit (fragments)
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 14-Feb-1997 #sequence_revision 13-Mar-1997 #text_change
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A;Molecule type: DNA
A;Residues: 1-18 <SMR>
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A;Description: The catalytic subunits of Ser/Thr protein phosphatases from Caenorhabdit.
A;Reference number: Z22131
A;Accession: T42441
                                                                                                                                                                                                                                                       R; Kasperaitis, M.A.M.; Voorma, H.O.; FEBS Lett. 365, 47-50, 1995
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                                                                                                                                                                                                                                                                                                                                          translation
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Best Local Similarity
Matches 4; Conser
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Best Local Similarity
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DLLPA 6
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RESULT

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Ser/Thr protein phosphatase homolog - Caenorhabditis elegans (fragment)
C;Species: Caenorhabditis elegans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 02-Jun-:
C;Accession: T42258
C;Accession: T42258
R;Zeke, T.; Gergely, P.; Dombradi, V.
submitted to the EMBL Data Library, July 1996
A;Description: The catalytic subunits of Ser/Thr protein phosphatases f;
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A;Title: Isolation and identification of paralytic peptides from hemolymph of the lep A;Reference number: A39855; MUID:91302298
A;Accession: B39855
A;Status: preliminary
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;Species: Manduca sexta (tobacco hornworm)
C;Date: 30-Dec-1991 #sequence_revision 30-Dec-1991 #text_change 03-Feb-1994
C;Accession: B39855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Description: glycine reductase complex catalyzes the reductive C; Keywords: ATP; oxidoreductase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Schraeder, T.; Andreesen, J.R.
Eur. J. Blochem. 206, 79-85, 1992
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A; Residues: 1-23 <LUE>
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Eur. J. Blochem. 217, 791-798, 1993
A;Title: Components of glycine reductase :
A;Reference number: S38988; MUID:94039119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Species: Eubacterium acidaminophilum
C;Date: 07-Oct-1994 #sequence_revision 01-Dec-1995
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A; Residues: 1-23 <SKI>
C; Superfamily: paralytic peptide
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A; Residues: 1-23
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A; Accession: S21250
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A; Reference number:
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Matches 7
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1; Mismatches
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8;
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1.1e+03;
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                                                                                                              #text_change 02-Jun-2000
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R;Roedin, J.; Rask, L.

Eur. J. Biochem. 192, 101-107, 1990

A;Title: Characterization of matteuccin, the

A;Reference number: S11350; MUID:90382429

A;Accession: S11351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hypothetical protein - phage TW19 (fragment)
C;Species: phage TW19
C;Accession: S13996
C;Accession: S13996
R;Inokuchi, Y; Hirashima, A.; Watanabe, I.
J. Mol. Biol. 158, 711-730, 11982
A;Reference number: S07250; MUID:83010313
A;Reference number: S07250; MUID:83010313
A;Accession: S13996
A;Recession: S13996
A;Recession: S13996
A;Recession: S13996
A;Residues: 1-25 (INO)
A;Residues: 1-25 (INO)
A;Residues: 1-25 (INO)
                                       RESULT
S61797
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A; Residues: 1-25 < ROE>
C; Keywords: heterodimer; seed
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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-24 <ZEK>
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C;Date: 19-Mar-1997 #sequence_revision 21-Nov-1998 #text_change 01-Feb-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    spore storage protein light chain isoform M2b - ostrich fern (fragment) N; Alternate names: matteuccin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: EMBL:Z77734; PIDN:CAB01293.1
C;Superfamily: phosphoprotein phosphatase; phosphoesterase core homology; phosphoproteir
T-cell-specific transcription factor 1 splice form N; Alternate names: transcription factor TCF-1F
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
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Best Local Similarity 36.4
Conservative
                                                                                                                                                                                                               Query Match
Best Local
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Best Local Similarity 60.0%;
Matches 3; Conservative
                                                                                                                                                                                             Matches
                                                                                                                   12 LHQCDLRP 19
                                                                                                                                                                                           Local Similarity hes 5; Conserv
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| 12 PSCEG 16
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                                                                                                                                                       7 LHATDLLP 14
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                                                                                                                                                                                             Conservative
                                                                                                                                                                                                               22.7%;
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                                                                                                                                                                                             0;
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Pred. No. 1.2e+03;
2; Mismatches 0;
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Pred. No. 1.2e+03;
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Pred. No. 1.2e+03;
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13)
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                   (fragment)
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A; Molecule type: protein
A; Molecule type: protein
A; Residues: 1-18 <CHA>
A; Experimental source: strain 18D, serotype 0.42:k86:H37
C; Comment: This enterotoxin is one of several, of differ:
idues of the heat-stable enterotoxin ST-I
C; Superfamily: heat-stable enterotoxin ST
C; Keywords: enterotoxin; heat-stable protein
C; Keywords: heat-stable enterotoxin ST-2 #status experiments
F; 1-18/Product: heat-stable enterotoxin ST-2 #status experiments
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C;Date: 19-Mar-1997 #sequence_revision 18-Jul-1997 #text_change
C;Accession: S61797; #Seguence_revision 18-Jul-1997 #text_change
C;Accession: S61797; #S61879
R;Mayer, K; Wolff, E; Clevers, H.; Ballhausen, W.G.
Biochim. Biophys. Acta 1263, 169-172, 1995
A;Title: The human high mobility group (HMG)-box transcription f
A;Reference number: S61796; MUID:95367594
A;Accession: S61797
A;Molecule type: mRNA
A;Residues: 1-11 <MNY
A;Residues: 1-11 <MNY
A;Residues: 1-11 <MNY
A;Accession: S61796
                                                                                                                                                                                                                                                                                                                                            heat-stable enterotoxin ST-2 - Escherichia coli
C;Species: Escherichia coli
C;Date: 06-Jul-1982 #sequence_revision 06-Jul-1982 #text_change
C;Accession: A01823
R;Chan, S.K.; Giannella, R.A.
J. Biol. Chem. 256, 7744-7746, 1981
A;Reference number: A01823; MUID:81204141
A;Accession: A01823
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QHEC2
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Best Local Similarity
Thes 6; Conserve
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A; Residues: 1-16 <SUG>
A; Experimental source: ATCC 15003
C; Keywords: antibiotic resistance
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Best Local Similarity
""+"hes 4; Conserve
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A;Note: DNA was also sequenced
C;Keywords: alternative splicing; DNA binding; transcription factor
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A;Accession: $68730
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Pred. No. 7.8e+02;
otoxin ST-2 #status experimental #status predicted
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dissipilatory sulfite reductase alpha chain, membrane-bound - Desulfovibrio desulfurican C:Species: Desulfovibrio desulfuricans C:Species: Desulfovibrio desulfuricans C:Date: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 17-Mar-1999 C:Accession: S63489
R:Steuber, J: Arendsen, A.F.; Hagen, W.R.; Kroneck, P.M.H.
Bur. J. Blochem. 233, 873-879, 1995
A:Title: Molecular properties of the dissimilatory sulfite reductase from Desulfovibrio A:Reference number: S63489; MUID:96085152
                                                                                                                                                                                                                                                                                                                                                                                                                                      hemoglobin alpha chain - African clawed frog (fragment)
C:Species: Xenopus laevis (African clawed frog)
C:Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 19-May-2000
C:Accession: I51427
R:Patient, R.K.; Elkington, J.A.; Kay, R.M.; Williams, J.G.
Cell 21, 565-573, 1980
A:Fitle: Internal organization of the major adult alpha- and beta-globin genes of X.laev
A:Reference number: I51427; MUID:81001900
A:Reference number: I51427; MUID:81001900
A:Rocession: I51427
A:Status: preliminary; translated from GB/EMBL/DDBJ
A:Rolecule type: DNA
A:Residues: 1-18 <PAT>
A:Residues: 1-18 <PAT>
A:Cross-references: GB:J00975; NID:g214198; PID:g214199
C:Superfamily: globin; globin homology
C:Keywords: blood; oxygen carrier
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Infect. Immun. 57, 649-652, 1989
A:Title: Citrobacter freundii produces an 18-amino-acid heat-stable enterotoxin A:Reference number: A60103; MUID:89108617
A:Recession: A6010 protein
A:Residues: 1-18 <GUA>
C:Superfamily: heat-stable enterotoxin ST
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Pred. No. 1.3e+03;
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1.3e+03;
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RESULT 24
T42259
phosphoprotein phosphatase (EC 3.1.3.16) 1 catalytic chain - Caenorhabditis elegans (C;Species: Caenorhabditis elegans C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 02-Jun-2000 C;Accession: T42259 R;Zeke, T.; Gergely, P.; Dombradi, V. submitted to the EMBL Data Library, July 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                    paralytic peptide I - tobacco hornworm
C;Species: Manduca sexta (tobacco hornworm)
C;Date: 30-Dec-1991 #sequence_revision 30-Dec-1991 #text_change 03-Feb-1994
C;Date: 30-Dec-1991 #sequence_revision 30-Dec-1991 #text_change 03-Feb-1994
C;Accession: A3985
R;Skinner, W.S.; Dennis, P.A.; Li, J.P.; Summerfelt, R.M.; Carney, R.L.; Quistad, G.B
J, Biol. Chem. 266, 12873-12877, 1991
A;Title: Isolation and identification of paralytic peptides from hemolymph of the lep
A;Reference number: A39855; MUID:91302298
A;Accession: A39855
A;Status: preliminary
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         dissimilatory sulfite reductase alpha chain, soluble - Desulfovibrio desulfuricans C;Species: Desulfovibrio desulfuricans C;Species: Desulfovibrio desulfuricans C;Date: 28-Oct-1996 #sequence_revision 3-Mar-1997 #text_change 17-Mar-1999 C;Accession: S63490
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S63490
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A;Molecule type:
A;Residues: 1-19
                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: protein A; Residues: 1-23 <SKI>C; Superfamily: paralytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-20 <STE>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R;Steuber, J.; Arendsen, A.F.; Hagen, W.R.; Eur. J. Blochem. 233, 873-879, 1995
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Best Local Similarity 83.9

Matches 5; Conservative
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Best Local Similarity 43.3
Matches 7; Conservative
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Mismatches 1
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Caspecies: Schistocerca gregaria (desert locust)
C;Species: Schistocerca gregaria (desert locust)
C;Date: 20-Dec-1989 #sequence_revision 20-Dec-1989 #text_change 18-Aug-2000
C;Accession: A32543
R;Robb, S.; Packman, L.C.; Evans, P.D.
Blochem. Blophys. Res. Commun. 160, 850-856, 1989
Blochem. Blophys. Res. Commun. 160, 850-856, 1989
A;Title: Isolation, primary structure and bloactivity of Schistofirf-amide, a FMRF-amide
A;Reference number: A32543; MUID:89246543
A;Accession: A32543; MUID:89246543
A;Accession: A32543; MUID:89246543
A;Residues: 1-10 <ROB>
A;Residues: 1-10 <ROB>
A;Residues: 1-10 <ROB>
Search completed: February 5, 2001, 10:49:26 Job time: 739 sec
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                                                                                                                                                                                                                                                                                                                                                                                                       C;Superfamily: unassigned animal peptides
C;Keywords: amidated carboxyl end; neuropeptide
F;10/Modified site: amidated carboxyl end (Phe) #status experimental
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A;Molecule type: DNA
A;Residues: 1-24 <ZEK>
A;Cross-references: EMBL:Z77733; PIDN:CAB01292.1
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A;Reference number: Z22131
A;Accession: T42259
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A32543
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C;Superfami
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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.

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Result
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1 DVNYAFLHATDLLP
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9.913 Million cell updates/sec
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GAD65 fragment, pe
Glutamic acid deca
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65 kD Glutamic aci
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Pseudomonas HSP60	unit of p	a.	Partial pullanase	Partial pullanase	n thyrog!	Cull peptide antig	n secrete	t of huma		n of SI	118	Human subtilisin f	Human protease pep	Human protease pep	~	Insulin-like growt	Amino acids 250-25	Hepatitis C virus	Hepatitis C virus	HCV peptide NP-17.		þ	ס	B-cell epitope of	tide from the	tide	comprising	Helper T-cell pept	Teratocarcinoma-de	ם	V-1 g	ope of HIV-1

# ALIGNMENTS

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Skin test for diagnosis of cell-mediated diseases, esp. diabetes involving intradermal admin. of auto:reactive substances Donie F, En Pozzilli P, 20-JUL-1995; WPI; 1997-088254/09. (BOEF ) BOEHRINGER MANNHEIM GMBH. Endl J, P, Stahl 9507-1026561 Ganz M, L P; Jung G, Kientsch-engel

Aspergillus oryzae

Claim 11;

Page

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12pp; German

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              The present peptide is a framgent of the human 65 kD glutamine decarboxylase (GAD), which can be used to diagnose, or diagnose a predisposition to, a tumour or immunological disease, preferably an autoimmune disease, especially diabetes. It can also be used as a reagent to determine specific T cell subpopulations, in medicaments to treat or prevent immunological diseases, preferably autoimmune diseases, especially diabetes, to produce antigens, especially immunogens or tolerogens and to isolate specific T cell subpopulations, which can be used to produce antigens or for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         W18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for decarboxylase (GAD). The fragments are autoreactive substances used for diagnosis of insulin-dependent diabetes mellitus (IDDM). The diagnosis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected by administrating an autoreactive substance intradermally and establishing the diagnosis on the basis of the occurrence or lack of a positive reaction at the site of administration. The method is used for diagnosis of autoimmune and tumour diseases, preferably T-cell-mediated diseases such as rheumatoid arthritis, multiple sclerosis and especially IDDM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tumour; immunological; disease; autoimmune; diabetes; reagen determination; T cell; subpopulation; medicament; treatment; prevention; production; antigen; immunogen; tolerogen; isola
subpopulations, reinjection, op
                                                                                                                                                                            Claim 1; Page 12; 15pp; German.
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                                                                                                                                                                                                                            decarboxylase peptide(s) -
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Pred. No. 4.7e-12;
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autoimmune; diabetes; reagent;
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                                                                                    R76642-62 are derived from human glutamic acid decarboxylase and specifically react with T-cell sub-populations isolated from recently diagnosed Type-I diabetics. Pharmaceutical compsns. contg. these peptides and those shown in R77571-72, are useful for the diagnosis of a disease or predispositions of immune system diseases, tumours, and autoimmune diseases, including diabetes. The peptides are able to detect specific T-cell subpopulations that are then used for antigen prodn.,
                                                                                                                                                                                              Antigen-specific activated T-lymphocytes interaction with inventive peptide(s) of useful in diagnosis of e.g. diabetes and
                                                                                                                                                                                                                                                                         Albert W,
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20-JAN-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              diabetes; T-cell subpopulation; detection; antigen production;
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(BOEF ) BOEHRINGER MANNHEIM GMBH
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94DE-4401629
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peptide-MHC complexes;
auto:immune diseases
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involving
                    Glutamic acid decarboxylase; GAD65; auotimmune disorders; insulin-dependant diabetes mellitus; stiff man disease.
                                                                                                                                                                                                                                                                                                                                           w18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for diagnosis of insulin-dependent diabetes mellitus (IDDM). The diagnosis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected by administering an autoreactive substance intradermally and establishing the diagnosis on the basis of the occurrence or lack of a positive reaction at the site of administration. The method is used for diagnosis of autoimmune and tumour diseases, preferably T-cell-mediated diseases such as rheumatoid arthritis, multiple sclerosis and especially IDDM.
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Pozzilli P,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Endl J, Ganz M, P, Stahl P;
                                                                                                                                                                                                                                                                                                                        14 AA;
                                                                                                                                                                                                                                                         Conservative
                                                                                    (first entry)
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                                                            decarboxylase
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                                                                                                                                                                                                                                                                   66.4%;
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                                                           (GAD65)
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                                                                                                                                                                                                                                                                   Score 73;
Pred. No.
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                                                           fragment.
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5.1e-06;
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Best Local Similarity
Matches 13; Conserv
                                       07-JUN-1995;
21-SEP-1990;
18-JUN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New polypeptide fragments of glutamic acid decarboxylase - for diagnosis and treatment of auto:immune disease, esp. insulin dependent diabetes, also related nucleic acid, vectors, antibodies, Hybridoma(s) etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Q86481 and Q86482 encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 ederived. These fragments can be used to detect autoantibodies against GAD, e.g. to diagnose and treat GAD-related autoimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clare-Salzler
                                                                                    09-APR-1997;
                                                                                                        07-DEC-1999
                                                                                                                           US5998366-A
                                                                                                                                                                              GAD65; glutamic acid decarboxylase 65; autoimmune disorder; IDDM;
insulin dependent diabetes mellitus; Stiff man disease; diagnosis
                                                                                                                                                                                                            GAD65 fragment,
                                                                                                                                                                                                                                   03-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
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Tobin AJ,
                                                                                                                                               Homo sapiens.
                                                                                                                                                                   therapy.
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                                                                                                                                                                                                                                                                           Y59569 standard; peptide;
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                     (REGC ) UNIV CALIFORNIA
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Kaufman DL,
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ilarity 100.0%;
Conservative
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                                       95US-0485725.
90US-0586536.
91US-0716909.
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                                                                                                                                                                                                            peptide #7
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 Erlander
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Pred. No.
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7.6e-06;
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WPI; 2000-095930/08

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Best Local 9
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           Q86481 and Q86482 encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 were derived. These fragments can be used to detect autoantibodies against GAD, e.g. to diagnose and treat GAD-related autoimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
                                                                                                                                                     New polypeptide fragments of glutamic acid decarboxylase - f diagnosis and treatment of auto:immune disease, esp. insulin dependent diabetes, also related nucleic acid, vectors,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ameliorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stiff man
                                                                                                                Claim 1; Page 76; 100pp; English.
                                                                                                                                           antibodies, hybridoma(s)
                                                                                                                                                                                                                   WPI; 1995-131360/17.
                                                                                                                                                                                                                                              Clare-Salzler MJ,
                                                                                                                                                                                                                                                                                                       17-SEP-1993;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              Glutamic acid decarboxylase; GAD65; auotimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Glutamic acid decarboxylase (GAD65) fragment.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   disease
                                                                                                                                                                                                                                                                                                                                  24-AUG-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 insulin-dependant diabetes mellitus; stiff man
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 HATDLLPACDGER 20
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13; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          66.4%;
100.0%;
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                                                                                                                                            etc.
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Pred. No.
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red. No. 7.6e-06;
Mismatches 0;
                                                                                                                                                                                                                                              Kaufman
                                                                                                                                                                                                                                              DL,
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Similarity 12; Conser

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58.2%;

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DB 21; 0.00025;

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Best Local S
Matches 12
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21-SEP-1990;
18-JUN-1991;
                                  alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting II and the diagnosts is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are
                                                                               This sequence represents a fragment of the glutamic acid decarboxylase (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
 Sequence
                       available
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                                                                                                                                                                                                        Ameliorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stiff man
                                                                                                                                                                                                                                                                   Tobin
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                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-APR-2000
                                                                                                                                                                                              disease
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Y59540 standard; peptide; 20 AA.
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12; Conserv
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90US-0586536.
91US-0716909.
                         natural sources.
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100.0%;
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Pred. No.
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0.00025;
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                                                                                   drugs that
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                                                             IDDM
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W79176
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                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 12; Conserv
                                                                                                                                                                                                                                                                                                      This sequence represents a fragment of the glutamic acid decarboxylase 65 (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are available from natural sources.
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21-SEP-1990;
18-JUN-1991;
                                                                 W79176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ameliorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stiff man
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         Fusion immunoglobulin heavy chain HIV gp120 T cell epitope #54
                                                                                        W79176 standard;
                                                                                                                                                                                                                                                                                   Sequence
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                                    25-JAN-1999 (first entry)
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90US-0586536.
91US-0716909.
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                                                                                         peptide; 19
                                                                                                                                                                                                              58.2%; Score 64; DB 21; 100.0%; Pred. No. 0.00025; tive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B cell; T cell;:epitope: immunoglobulin; heavy chain; gp120; IgH; human immune deficiency virus; HIV; tollerance; treatment; therapy; prophylaxis; vaccine; chemotherapy; immune response; modifier; tumour; microbial infection; autoimmune disease; antibody; apoptosis; antiviral T cell immunity.
                                              Human immunodeficiency virus; therapy; HIV-1 infection; diagnosis; post-exposure prophylaxis; infection; cytotoxic agent targetting; neutralisation domain; BATO85; G3-136.
                                                                                                                   HIV-1 IIIB
                                                                                                                                                 06-JUN-1994 (first entry)
                                                                                                                                                                                                                    R43901 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New fusion immunoglobulin heavy chain including gp120 epitopes and related complete antibodies - DNA, vectors and transformed cells, used to induce tolerance to the epitopes for treatment of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1998-506315/43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scott D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-FEB-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cell immunity.
                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 42.9 nes 6; Conservative
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6 yaffykldiipiid 19
                                                                                                                                                                                                                                                                                                                                        4 YAFLHATDLLPACD 17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zambidis E;
                                                                                                                 gp120 monoclonal antibody antigenic peptide V15P
                                                                                                                                                                                                                                                                                                                                                                                                                                                             19 AA;
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                                                                                                                                                                                                                                                                                                                                                                                         34.5%;
                                                                                                                                                                                                                                                                                                                                                                                         Score 38;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                         5.4;
                                                                                                                                                                                                                                                                                                                                                                                                           DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                           Length 19;
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Best Local
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26-SEP-1991;
25-NOV-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The sequence is that of a synthetic peptide V15P corresponding to a unique neutralisation domain in the V2 region of HIV-1 gp 120, it can be used in the prodn. of monoclonal antibodies (MAbs) BAT085 and G3-136. The MAbs may be used for therapy of HIV-1 infection or AIDS, post-exposure prophylaxis and diagnosis of HIV-1 infection and to reduce or eliminate virus infected T-cells by antibody-dependent cellular cytotoxicity, complement-mediated cytolysis or other cytolytic or regulatory immune mechanisms. The MAb can also be used for targetting cytotoxic agents to HIV-1 infected cells.
                                                                                                                                                                                                                                                                                                                    JP10155493-A.
Aspergillus-derived phospholipase Al gene - used for the recombinant
                                                   WPI; 1998-391046/34
                                                                                                                                                                                                            03-OCT-1997;
                                                                                                                                                                                                                                                                16-JUN-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                    Aspergillus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aspergillus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-SEP-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example; Page 8; 9pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Monoclonal antibody to HIV-1 gp120 - used for therapy of HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1993-395339/49
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                                                                                                     (SANY ) SANKYO CO LTD.
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nes 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                      oryzae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          oryzae phospholipase Al peptide SEQ ID NO:3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BIOSYSTEMS INC
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87US-0137861.
91US-0692299.
91US-0767533.
91US-0797692.
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Pred. No. 19;
3; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 15;
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RESULT IN W87621 IN W87621 IN W87621 IN W87621 IN W87621 IN W8762 
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-SEP-1992;
29-MAY-1987;
27-DEC-1987;
26-SEP-1991;
                       The present sequence represents an epitope of the gp120 protein of human immune deficiency virus (HIV)-1. The sequence comprises amino acids 169 to 183 of gp120. The specification describes monoclonal antibodies which bind to epitopes of the gp120 protein. Specifically, these antibodies are designated BAT123, 267 and 085. Monoclonal antibodies neutralise HIV-1, inhibiting both infection of T cells and formation of syncytia, so are used to treat acquired immune deficiency syndrome (AIDS) and AIDS-related complex, by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence represents a phospholipase Al (PLAL) peptide derived from Aspergillus oryzae. Phospholipase an be prepared by culturing host cells and collecting the host cell from the culture. Die encoding mature PLAL can be used to produce recombinant phospholipase
                                                                                                                                                                                                                                                                                                                                          Monoclonal antibodies directed against regions of gp120 of human immune deficiency virus-1 - are neutralising and able to inhibit infection of T cells and formation of syncytla, used for treatment, prevention or diagnosis of acquired immune deficiency syndrome
                                                                                                                                                                                                                                                                                     Claim 8; Column 9; 16pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1999-095002/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-SEP-1992;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Epitope of HIV-1 gp120 protein which binds antibody BAT085.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      production of phospholipase A of high purity and in a high yield
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TANO-) TANOX INC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pitope; gp120 protein; monoclonal antibody; HIV-1; antibody BAT1 ntibody BAT267; antibody BAT085; T cell infection inhibition; ntibody BAT267; antibody BAT085; T cell infection inhibition; ynoytia formation; acquired immune deficiency syndrome; AlDS; IDS-related complex; passive immunisation; antiviral; cytotoxic;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
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87US-0137861.
91US-0767533.
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41.7%;
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Pred. No.
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19;
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Best Local
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29-MAY-1987;
24-DEC-1987;
25-APR-1989;
05-JUN-1992;
                     antibody (Ab) which binds to an epitope within amino acid residue agent, an anti-viral agent or an agent which facilitates passage through the blood brain barrier. Also described is an antibody conjugated as above but where the Ab binds to an epitope within amino acid residue 298-312 of gpl2 which neutralises HIV-1. The present sequence represents an HIV-1 gpl20 monoclonal antibody BAT085 residue 178 to 192 from an example of the present invention. The Ab are monoclonal Ab which bind to the gpl20 protein on the envelope of HIV-1. They inhibit the infection of T-cells and also inhibit syncytium formation. The antibodies are group specific and neutralise different strains and isolates of HIV-1. The antibodies have a variety of uses, including the especially used to kill infected T-cells.
                                                                                                                                                                                                                                                                                        Antibody conjugate comprising monoclonal antibody - which binds to epitope within amino acid residue of gpl20 which neutralises HIV-1 conjugated with, e.g. cytotoxic agent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and in extracorporeal systems. They can also be used as immunoassay reagents (for diagnosis or measurement of viral load) and to screen for neutralising epitopes, potentially useful in vaccine developmen
                                                                                                                                                                                                                               The present invention describes an antibody conjugate comprising
                                                                                                                                                                                                                                                             Example 4; Column 25;
                                                                                                                                                                                                                                                                                                                                                                               Chang NT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-MAR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-NOV-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human immunodeficiency virus type 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HIV-1; gpl20; epitope; monoclonal antibody; envelope; neutralise; inhibit; infection; T-cell; inhibit syncytium formation; AIDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HIV-1 gp120 monoclonal antibody BAT085 residue 178 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-JAN-1999
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                                                                                                                                                                                                                                                                                                                                                                               Chang T,
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                                                                                                                                                                                                                                                                                                                                                                                                                                        87US-0057445.
87US-0137861.
89US-0343540.
92US-0895197.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93US-0026276
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                                                                                                                                                                                                                                                                                                                                                                               Fung SC,
                                                                                                                                                                                                                                                            22pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 34; DB
Pred. No. 19;
                                                                                                                                                                                                                                                                                                                                                                               Kim YW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                 Sun
                                                                                                                                                                                                                                                                                                                                                                                 BN,
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Score 34; DB Pred. No. 27;

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Mismatches

Sequence

20 AA;

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W76928
ID W776928
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                                                    This sequence is an epitope used in the construction of a novel fusion immunoglobulin heavy chain (IgH) protein with a mammalian, especially human, IgH chain fused in frame at its N-terminus to one or more human immune deficiency virus (HIV) gpl20 epitopes. Fusion Ig proteins and/or transfected cells are used to tolerise subjects to gpl20 epitopes and to maintain this tolerance, particularly for treatment of HIV infection, optionally together with other therapeutic/prophylactic agents such as vaccines, chemotherapeutic agents and immune response modifiers. Such proteins can be used against other diseases where an immune response is delaterious, e.g. microbial infection, tumours or autoimmune disease. Induction of tolerance suppresses production of antibodies against gpl20, so prevents or inhibits 'bystander' apoptosis of uninfected T cells that are bound to gpl20 protein, maximising induction of protective antiviral or cell immunity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
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Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human immune deficiency virus; HIV; toles prophylaxis; vaccine; chemotherapy; immur microbial infection; autoimmune disease; antiviral T cell immunity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New fusion immunoglobulin heavy chain including gp120 epitopes and related complete antibodies - DNA, vectors and transformed cells, used to induce tolerance to the epitopes for treatment of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B cell; T cell;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fusion immunoglobulin heavy chain HIV gp120 B cell epitope #68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W76928;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scott D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-FEB-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-JAN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        immune deficiency virus infection
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
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5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 38; 154pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 epitope; immunoglobulin;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₿
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   immune response; modifier; tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tolerance; treatmen
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19;
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prostate specific antigen; prostate specific membrane antigen; prostate acid phosphatase; mucin; lactadherin;

teratocarcinoma derived growth factor; PSA; PSMA; PAP; CRIPTO-1.

Major Histocompatibility Complex; uroplakin;

Tumour associated antigen peptide: TAA; cancer; carcinoma; treatment; prevention; cure; anti-tumour vaccine; metastas breast; bladder; prostate; pancreas; ovary; thyroid; colon stomach; carcinoma; MHC Class I; HLA-A2; human;

metastases;

peptide.

Teratocarcinoma-derived growth factor (CRIPTO-1) antigenic

19-JUN-2000 Y82873;

(first entry)

Y82873 standard;

peptide; 9

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Tumour associated antigen peptides (TAA) may be used for the treatment, prevention and cure of cancer acrancer metastases. The cancer may be breast, bladder, prostate, pancreas, ovary, thyrold, colon, stomach, head or neck cancer or a carcinoma. The tumour associated antigens are presentable to the immune system by HLA-A2 molecules and are generally between 8 to 10 amino acids in length. The amino acids located at positions 2 and 9 of the tumour associated antigens are the anchor residues which participate in the binding to MHC class I molecules, more specifically HLA-A2. More tumour associated antigens are described in GENESED records Y82806-Y82882 and Y8285-YY82869 are derived from prostate specific antigen creords Y82805-Y82829 are derived from prostate specific antigen creords Y8285-Y82839 are derived from prostate specific membrane antigen (PSAA). Those described in records Y82830-Y82836-Y82839 are derived from prostate acid phosphotase (PAA). Those described in records Y82840-Y82846 are derived from tractadherin (BA-46). Those described in records Y82847-Y82854 are derived from prostate acid phosphotase (PAA). Those described in records Y82841-Y82846 are derived from Mucin and those described in records Y82847-Y82854 are derived from Mucin and those described in records Y82871-Y82882 are derived from molecular in a formal teritorial Y82861 are derived (CRIPTO-1). And the second of the cords Y82871-Y82882 are derived from macin and those described in records Y82871-Y82882 are derived from molecular in the factor (CRIPTO-1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tumor associated antigen peptides, especially derived from uroplakin, useful as vaccines to prevent or cure cancers including breast, bladder, prostate, pancreas, ovary, thyroid, colon and stomach -
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-205463/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eisenbach L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (YEDA ) YEDA RES & DEV CO LTD. (BIOT-) BIO-TECHNOLOGY GEN CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-JUL-1998;
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                                                              w85138-283 represent helper T-cell peptides, which can bind to the human leucocyte antigens (HLA) DRAW4, DRI and DR7. The peptides are used in the course of the invention. The specification describes peptides that that induce a cytotoxic T lymphocyte (CTL) response, and T-helper peptides, that are used together to generate a CTL response for the treatment or prevention of viral, fungal, bacterial or parastic infections (e.g. hepatitis, acquired immune deficiency syndrome or malaria) or cancer (e.g. renal or cervical carcinoma, lymphoma, prostate cancer or condyloma acuminatum). Helper T-cell peptides may be used alone to induce a helper T cell response, e.g. in cases of autoimmune disease, allograft rejection, allergy, Lyme disease, hepatitis,
                                                                                                                                                                                                                                                                                                         Composition containing peptide that induces cytotoxic T lymphocyte response, and helper peptide - can bind to human leucocyte antigen alleles, used to treat or prevent cancers, parasitic infections and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Helper T-cell peptide; human leucocyte antigen; HLA; DR4w4; cytotoxic T lymphocyte; CTL; hepatitis; autoimmune disease; acquired immune deficiency syndrome; alaria concer; allograft rejection; allergy; Lyme disease; hepatitis; post-streptococcal endocarditis; glomerulonephritis; food hypersensitivity.
    Sequence
                                                   disease, allograft rejection, allergy, Lyme disease, hepatitis, post-streptococcal endocarditis, glomerulonephritis and food
                                                                                                                                                                                                                                                              Claim 11; Page 39; 51pp; English
                                                                                                                                                                                                                                                                                             autoimmune disease
                                                                                                                                                                                                                                                                                                                                                                         WPI; 1998-427679/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-FEB-1997;
23-JAN-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hepatitis B virus.
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                                    hypersensitivity.
                                                                                                                                                                                                                                                                                                                                                                                                                                    (EPIM-) EPIMMUNE INC
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15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                     Sidney J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18
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97US-0036713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98WO-US01373.
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                                                                                                                                                                                                                                                                                                                                                                                                       Southwood
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R23839
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                                                                                                                                                                                                                                                                      The region of GPIb found to be responsible for its ability to bind to vWF lies between amino acids 165-260. Overlapping peptides derived from this region and having terminal Cys or Lys residues are found to bind specifically to vWF. These peptides can be used to isolate vWF or factor VIII:C-vWF complex.
                                                                   Peptide from the
                                                                                       05-NOV-1992
                                                                                                                           R23839 standard; peptide; 17
                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                               New blood factor peptides - specifically binding to von Willebrand factor or
                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1988-362157/51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-JUN-1987;
02-MAR-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Glycoprotein Ib (GPIb) Factor VIII binding region; von Willebrand Factor (vWF); factor VIII:C-vWF complexes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P82057;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P82057 standard; protein; 20
        US5108898-A.
                           Homo sapiens
                                               FN; toxaemia;
                                                                                                                                                                                                                                                                                          See also
                                                                                                                                                                                                                                                                                                                                                             Example; Page 7; 12pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Kumar AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ZYMO-) ZYMOGENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-JUN-1988;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EP295645-A.
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                                                                                                                                                                            4 YAFLHATDLLPACD 17
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5 faflhgnpwlcnce 18
                                                                                                                                                                                                                                                                                         P82055-6 or P82058-P82060
                                                                                                                                                                                                                                                                                                                                                                                                                                 Hagen FS,
                                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                     Conservative
                                                                                     (first_entry)
                                                                                                                                                                                                                                                                      AA;
                                              pregnancy; type III.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87US-0062896
88US-0162877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      88EP-0109532
                                                                  ED1 domain of fibronectin.
                                                                                                                                                                                                                              29.1%;
42.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     INC
                                                                                                                                                                                                                                                                                                                                                                                                                                 Sledziewski AZ;
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                                                                                                                                                                                                                               Score 32; DB
Pred. No. 58;
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                                                                                                                                                                                                                     Mismatches
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                                                                                                                                                                                                                    6;
                                                                                                                                                                                                                                        Length 20;
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                                                                                                                                                                                                                     Indels
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RESULT
R23840
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                                                                                                                                                                                                                       XXXXXXX
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Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The peptide was synthesised by standard methods and has a sequence based on residues 45-60 of the EDI sequence. The peptide was used to raise antibodies which will immunoreact with EDI but not with a plasma fibronectin monomer. The antibodies can be used for detecting fibronectin contg. variably included Type III repeats in a sample, thus determining patients destined to develop toxaemia, partic. preeclampsia, prior to the onset of maternal signs and symptoms of the disease, allowing for early therapeutic intervention. See also R23837-42.
Predicting toxaemia in of fibronectin having vbody fluid sample
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Predicting toxaemia in pregnancy - by detecting elevated levels
  of fibronectin having variably included type III repeat region in
  body fluid sample
                                                          WPI; 1992-166519/20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-APR-1992.
                                                                                                                                                 18-JAN-1989;
                                                                                                                                                                                                         28-APR-1992.
                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                          Peptide from
                                                                                                                                                                                                                                                                                                                                                       05-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                      R23840;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 10; Page 8; 9pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1992-166519/20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-JAN-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-JAN-1989;
                                                                                                                  (PETE/) PETERS
                                                                                                                                                                            18-JAN-1989;
                                                                                                                                                                                                                                   US5108898-A.
                                                                                                                                                                                                                                                                                             FN; toxaemia;
                                                                                                                                                                                                                                                                                                                                                                                                                R23840 standard; peptide; 19 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lockwood CJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (PETE/) PETERS J H.
                                                                                       Lockwood CJ, Peters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11 DLLPACDGE 19 :| || || || ||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   :| || |||
1 elfpapdge 9
                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                          the ED1 domain of fibronectin.
                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peters
                                                                                                                                                                                                                                                                                           pregnancy; type III
                                                                                                                    JH.
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                                                                                                                                                                            89US-0298622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28.2%;
                n pregnancy - by detecting elevated levels variably included type III repeat region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 31;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 17;
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                  'n
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Claim 10; Page 8; 9pp;

English

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RESULT
W96277
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Best Local
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                                      Testis-specific calpastin and peptides derived from it can be used for detecting antibodies for assessing infertility in a patient. The peptides and antibodies raised by them can also be used for inhibiting fertilisation of an egg by a sperm in a mammal. Testis specific calpastin peptides can therefore be used in the production of a vaccine used to inhibit fertilisation of an egg by sperm. The vaccine can be used as topical contraceptives in mammals, sperm.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Calpastin; isoform; testis; antibodies; vaccine; inhibition; fertilisation; egg; spermatazoa; sperm; contraceptive; B-cell epitope; T-cell epitope.
                                                                                                                                                         Claim 8; Page 34; 48pp; English.
                                                                                                                                                                                     New testis-specific isoforms of calpastatin peptides - used in vaccines and for the production of antibodies which can inhibit the fertilisation of an egg by sperm in a mammal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B-cell epitope of testis specific isoform of calpastin
Sequence
                                                                                                                                                                                                                                                 WPI; 1999-131861/11.
                                                                                                                                                                                                                                                                             Goldberg
                                                                                                                                                                                                                                                                                                                                    20-JUL-1998;
21-JUL-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-JUN-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W96277 standard; Peptide; 21 AA.
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                           including
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                           dogs, cats
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19 AA;
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AA;
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97US-0053337
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                            other
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                            domestic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                            animals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13;
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                            and
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Query Match

28.2%;

Score 31;

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20;

Length

21;

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RESULT
R89429
ID RE
XX
AC RE
XX
DT 1:
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Best Local Similarity
Thehes 5; Conserve
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W30416
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Matches 5; Conserv
                                                                                                                                                                                                                           target genes. The plasmid comprises a sequence encoding the test peptide, a promoter comprising the target gene, and a reporter gene bound to the promoter. The present sequence represents a specifically claimed peptide with affinity to HRE-I. The plasmids are used for screening for peptides which bind to target genes. The identified peptides can be used for the treatment of conditions associated with the inhibition of the expression the genes, and treatment of conditions
  13-SEP-1996
                      R89429;
                                          R89429 standard; Protein; 15 AA
                                                                                                                                                                                                                                                                                                                                                                                                                        (YAWH )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Binding site; HRE-I; screening; H-Ras; target gene; plasmid; inhibition; affinity peptide.
                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                    associated with H-Ras.
                                                                                                                                                                                                                                                                                                     A novel plasmid has been developed for screening peptides which bind
                                                                                                                                                                                                                                                                                                                           Claim 41; Page 69; 127pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                WPI; 1997-503115/46
                                                                                                                                                                                                                                                                                                                                                                                                     Kato T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         03-OCT-1996;
01-APR-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HRE-I affinity peptide SEQ ID NO:34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W30416;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         W30416 standard;
                                                                                                                                                                                                                                                                                                                                                Plasmid for screening peptide(s) which bind target treatment of conditions associated with H-Ras
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-MAR-1997;
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                                                                                                                                                                                               7 AA;
                                                                                                                                          Conservative
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 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                           STEEL
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96JP-0101990.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptide;
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                                                                                                                                                     27.3%;
71.4%;
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                                                                                                                                                     Score 30; DB 18;
Pred. No. 2.1e+05
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                                                                                                                                          Mismatches
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Mismatches
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                                                                                                                                                               Length
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                                                                                                                                                                                                                                                                                                                                                             genes
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                                                                                                                                           Gaps
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KLH-conjugated peptide based on human zeta protein

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RESULT
W85278
ID W8
XX
AC W8
XX
AC W8
XX
DT 16
XX
                                                                                                                                                                                                    Query Match
Best Local Similarity
"~+~hes 6; Conserva
                                                                                                                                                           B
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                                                                                                                                                                                                                                                                                        R89428 and R89429 are keyhole limpet haemocyanin (KLH)-conjugated peptides with sequences based on the sequence of the human zeta protein. The peptides are used to produce monoclonal and polyclonal antibodies for use in an ELISA assay for human CD3-epsilon and zeta proteins. This assay is given as part of an example of a method for identifying an altered immune system by evaluating a patient's immune system index (ISI) in lymphocyte prepns. The method involves the determination of abnormally high or low amts. of certain immune system proteins and their interactions, e.g. T lymphocyte signal transduction proteins. Th-1 or TH-2 type biological response modifiers (BRW) and DNA binding proteins. The method is useful in diagnosing patients with immunosuppression, hyperimmunity and anticommunity and anticommunity and services.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Keyhole limpet haemocyanin; KLH; Interferon; IFN; probe; ISI; immune status index; TCR; T cell antigen receptor; BSM; biological response modifier; cancer; Hodgkin's disease; leukaemia; leprosy; tuberculosis; TB; leishmania; sepsis; HIV; human immunodeficiency virus; CMV; cytomegalovirus; Epstein Barr; schistosomiasis; malaria; lupus; autoimmune disease; identification;
Helper T-cell peptide derived
                             16-FEB-1999
                                                                                   W85278 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ghosh
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                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                   autoimmunity and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 1; Page 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Identification of altered immune status in patients immune status index in lymphocyte prepns.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-JUL-1994;
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US DEPT HEALTH & HUM.
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                                                                                                                                                                                                                                                                                        15 AA;
                                                                                                                                                                                                                  Conservative
                            (first entry)
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                                                                                  peptide;
                                                                                                                                                                                                                                                                                                                 in monitoring transplant progression.
                                                                                                                                                                                                                               27.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   70pp; English.
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                                                                                      15
                                                                                                                                                                                                                ;
                                                                                                                                                                                                                              Score 30; DB
Pred. No. 91;
from a Hepatitis C virus
                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ochoa AC,
                                                                                                                                                                                                                                             17;
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                                                                                                                                                                                                                                             Length 15;
                                                                                                                                                                                                                Indels
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protein
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Best Local Similarity
Matches 8; Conserv
                               Hepatitis C CD8; CD4.
                                                                                                                                                                                                                                                                                                                                                                 W85138-283 represent helper T-cell peptides, which can bind to the human leucocyte antigens (HLA) DR4w4, DR1 and DR7. The peptides are used in the course of the invention. The specification describes peptides that that induce a cytotoxic T lymphocyte (CTL) response, and T-helper peptides, that are used together to generate a CTL response fo the treatment or prevention of viral, fungal, bacterial or parasitic infections (e.g. hepatitis, acquired immune deficiency syndrome or malaria) or cancer (e.g. renal or cervical carcinoma, lymphoma, prostat cancer or condyloma acuminatum). Helper T-cell peptides may be used alone to induce a helper T cell response, e.g. in cases of autoimmune disease, allograft rejection, allergy. Lyme disease, hepatitis, post-streptococcal endocarditis, glomerulonephritis and food hypersensitivity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic. Hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Helper T-cell peptide; human leucocyte antigen; HLA; Dicytotoxic T lymphocyte; CTL; hepatitis; autoimmune discaptived immune deficiency syndrome asserting allograft rejection; allergy; Lyme disease; hepatitis; post-streptococcal endocarditis; glomerulonephritis; food hypersensitivity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Composition containing peptide that induces cytotoxic T lymphocyte response, and helper peptide - can bind to human leucocyte antigen alleles, used to treat or prevent cancers, parasitic infections and
Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 11; Page 39; 51pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-FEB-1997;
23-JAN-1997;
                                                                                                   24-MAR-1995
                                                                                                                            R56614;
                                                                                                                                                    R56614 standard; protein;
                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      autoimmune disease
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-JUL-1998
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                                                                        HCV peptide NP-17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (EPIM-) EPIMMUNE INC
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                                               epitope; T-cell; immunity;
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                                                                                                                                                                                                                     A T-cell stimulating peptide is claimed which is ca. 5-20 amino acids long and part of the core protein of HCV and is recognised by and stimulates T-cells. A CD8-positive T-cell stimulating peptide has the sequence given in R56606 (NP-9) or R56616 (9MA). A CD4-positive T-cell stimulating peptide has the sequence given in R56609 (NP-12) or R56614 (NP-17). Synthetic peptide mixts. (Mix A: NP-1 - NP-5, Mix B: NP-6 - NP-10, Mix C: NP-11 - NP14, MixD: NP-15 - NP-18) were used in experiments to evaluate activity.
                                                                                                                                                                                                                                                                                                                                                                Claim 5; Fig 2; 14pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                            T cell epitope present in the core protein region of Hepatitis C virus (HCV) - used for activation of cellular immunity mechanisms {\bf r}
                                                                                                                                                                                             Sequence
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10-NOV-1992;
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                                                                   2 VNYAFLHATDLLPAC 16
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hemocyanin	Ig H chain	multicatalytic	chitinase	gene 1.5 protein	actin - mouse	probable malate	probable 2.9K pro	glycoprotein	chlorophyll a/b-b	ribosomal protein	glucan endo-1,3-be	ovohemerythri	ribosomal protei	major allergen	dodecenoy1-CoA

### ALIGNMENTS

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R.Kraut, M.; Hugendieck, I.; Herwig, S.; Meyer, O. Arch. Microbiol. 152, 335-341, 1989
A;Title: Homology and distribution of CO dehydrogenase structural genes in carboxydot A;Reference number: PL0138; MUID:90055678
A;Accession: PL0142
A;Accession: PL0142
A;Molecule type: protein
A;Residues: 1-14 <KRAP
C;Comment: Carbon-monoxide dehydrogenase consists of three polypeptide chains: large, C;Keywords: oxidoreductase
Ş
                                                                                                                                                                                                                                                      C;Accession: S11383
R;Avraham, Y; Grossowicz, N; Yashphe, J.
Biochim. Biophys. Acta 1040, 287-293, 1990
A;Title: Purification and characterization
A;Reference number: S11383; MUID:90381286
A;Accession: S11383
                                                                                                                                                                                                                                                                                                                                                                                             uridine phosphorylase (EC 2.4.2.3) - Lactobacillus casei (fragment)
N;Alternate names: pyrimidine phosphorylase
C;Species: Lactobacillus casei
C;Date: 19-Mar-1997 #sequence_revision 26-Feb-1998 #text_change 26-Feb-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
PL0142
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A; Residues: 1-25 < AVR>
A; Experimental source: strain ATCC 7469
C; Keywords: glycosyltransferase; homotetramer;
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C;Species: Pseudomonas carboxydoflava
C;Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 28-Apr-1993
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l; Mismatches 1;
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Pred. No. 8.1e+02;
L; Mismatches 3;
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KVIPETKLK 12

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S-layer protein - Bacillus thuringiensis (fragment)
C:Species: Bacillus thuringiensis
C:Date: 20-Feb-1993 #sequence_revision 20-Feb-1993 #text_change 12-Mar-1993
C:Accession: A60476
R:Luckevich, M.D.; Beveridge, T.J.
J. Bacteriol. 171, 6656-6667, 1989
A:Title: Characterization of a dynamic S layer on Bacillus thuringiensis.
A:Reference number: A60476; MUID:90078111
A:Accession: A60476
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C;Date: 10-Aug-1990 #sequence_revision 10-Aug-1990 #text_change 12-Apr-1995
C:Accession: A34921
R:Hudson, G.S.; Mahon, J.D.; Anderson, P.A.; Gibbs, M.J.; Badger, M.R.; Andrews, T.J.; W.J.; Biol. Chem. 265, 808-814, 1990
J. Biol. Chem. 265, 808-814, 1990
A:Title: Comparisons of rbcL genes for the large subunit of ribulose-bisphosphate carbox A; Reference number: A34921; MUID:90110139
A; Accession: A34921; MUID:90110139
A; Status: preliminary
                                                                                                                                                   R:Rjazankina, O.I.; Shchelkunov, S.N.; Muravlev, A.I.; Netesova, Mol. Biol. (Mosk.) 24, 968-976, 1990
A;Title: The molecular biological study of vaccinia virus genome A;Reference number: PN0119; MUID:91066899
A;Accession: PN0122
                                                                                     A;Mölecule type: DNA
A;Residues: 1-13 <RJA>
C;Superfamily: variola major virus hypothetical protein
                                                                                                                                                                                                                                                C;Species: vaccinia virus
C;Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change
C;Accession: PN0122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Molecule type: protein
A;Residues: 1-10 <LUC>
C;Comment: The S-layer, or surface array, is the
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1; Mismatches 3;
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Pred. No. 7e+02;
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Pred. No. 1.2e+03;
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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Resldues: 1-17 <ARES>
A;Cross-references: GB:S54074; NID:g264876; PIDN:AAD13872.1; PID:g4261572
C;Superfamily: serum albumin; serum albumin repeat homology
                                                                                                   A;Title: Molecular evaluation of an Alu repeat including A;Reference number: I54269; MUID:93154720 A;Accession: I54269
                                                                                                                                                                 vitamin D binding protein - human (fragment)
C;Species: Homo sapiens (man)
C;Species: 10.Nov-1996 *sequence_revision 01.Nov-1996 *text_change 21.Jul-2000
C;Date: 01.Nov-1996 *sequence_revision 01.Nov-1996 *text_change 21.Jul-2000
C;Accession: I54269
C;Accession: I54269
R;Braun, A.; Bichlmaier, R.; Muller, B.; Cleve, H.
Hum. Genet. 90, 526-532, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-14 (LEV)
A; Experimental source: bone marrow
C; Keywords: immunoglobulin
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J. Exp. Med. 178, 317-329, 1993
A;Title: Molecular characterization of transgene-induced A;Reference number: PH1580; MUID:93301609
A;Accession: PH1617
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A;Residues: 1-14 </EV>
A;Experimental source: bone marrow
C;Keywords: immunoglobulin
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J. Exp. Med. 178, 317-329, 1993
A;Title: Molecular characterization of transgene-induced A;Reference number: PH1580; MUID:93301609
A;Accession: PH1614
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8 NVYAM 12
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RESULT 9
$63674

28 K secretory protein - rat (fragments)
C:Species: Rattus norvegicus (Norway rat)
C:Accession: $63674
C:Accession: $63674
R:Peshenko, I.V.; Novoselov, V.I.; Evdokimov, V.A.; Nikolaev, Y.V.; Shuvaeva, FEBS Lett. 381, 12-14, 1996
A;Title: Novel 28-kDa secretory protein from rat olfactory epithelium.
A;Reference number: $63674; MUID:96193902
A;Accession: $63674
                                                                                                       benzoyl-CoA ligase - Methanospirillum hungatei (fragment)
C:Species: Methanospirillum hungatei
C:Date: 19-Nov-1993 #sequence_revision 18-Nov-1994 #text_change 07-May-1999
                                                                                                                                                             RESULT
A48372
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A:Residues: 1-25 <CON-8
A:Note: the sequence from the summary is
C:Superfamily: gastrin-releasing peptide
C:Keywords: neuropeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                   gastrin-releasing peptide - smaller spotted catshark (tentative sequence) (fragment) C:Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish) C:Date: 31-Mar-1990 #sequence_revision 30-Jan-1998 #text_change 31-Mar-2000 C:Accession: S06263
R:Conlon, J.M.: Henderson, I.W.: Thim, L. Gen. Comp. Endocrinol. 68, 415-420, 1987
A:Title: Gastrin-releasing peptide from the intestine of the elasmobranch fish, Scyl: A:Reference number: S06263; MUID:88137922
A:Accession: S06263
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Best Local Similarity 100.0%;
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RESULT
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A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-15 <AUB>
A;Note: sequence extracted from NCBI backbone (NCBIP:118357)
                                                                                                                                                                                                       R;Kaslan, E.; Heyer, W.D.
J. Blol. Chem. 269, 14103-14110, 1994
A;Title: Schizosaccharomyces pombe fatty acid synthase mediates
A;Reference number: A54083; MUID:94245730
A;Accession: A54083
A;Status: preliminary
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                      p190/210, fatty acid synthase, p140exo2 strand exchange protein activator - C;Species: Schizosaccharomyces pombe
C;Date: 06-Oct-1994 #sequence_revision 18-Nov-1994 #text_change 12-Apr-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-19 <HUC>
A; Cross-references: EMBL: X08084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Huck, S.; Lefranc, M.P.
FEBS Lett. 224, 291-296, 1987
A;Title: Rearrangements to the JP1, JP and A;Reference number: S03076; MUID:88083552
A;Accession: S03076
                                                                                                                                          A; Note: sequence extracted from C; Superfamily: yeast fatty-acid
                                                                                                                                                                          A; Molecule type: protein A; Residues: 1-20 < KAS>
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C;Date: 31-Dec-1990 #sequence_revision 31-Dec-1990
C;Accession: S03076
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C; Date: 05-Jan-1334
C; Accession: C56894
R; Cusack, M.; Curry, G.; Clegg, H.; Abbott, G.
R; Cusack, M.; Curry, G.; Clegg, H.; Abbott, G.
R; Cusack, M.; Curry, G.; Clegg, H.; Abbott, G.
R; Cusack, M.; Curry, G.; Clegg, H.; Abbott, G.
R; Cusack, M.; Curry, G.; Clegg, H.; Abbott, G.
Comp. Biochem. Physiol. B 102, 93-95, 1992
                                                                                                                                                                                                                                        R:Cusack, M.; Curry, G.; Clegg, H.; Abbott, G. Comp. Biochem. Physiol. B 102, 935, 1992
A;Title: An intracrystalline chromoprotein from A;Reference number: A56894; MUID:92405551
                                                                                                                                                                                                                                                                                                                                                    C;Species: Waltonia inconspicua
C;Date: 05-Jan-1996 #sequence_revision 05-Jan-1996 #text_change 20-Jun-2000
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A;Molecule type: protein
A;Residues: 1-20 <CUS>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 intracrystalline chromoprotein 1 - Terebratella sar
C;Species: Terebratella sanguinea
C;Date: 05-Jan-1996 #sequence_revision 05-Jan-1996
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A56894
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A;Residues: 1-20 <CUS-
A;Note: sequence extracted from NCBI backbone (NCBIP:114884)
C;Keywords: chromoprotein
                                                                                    A; Note: sequence extracted C; Keywords: chromoprotein
                                                                                                                                  A; Molecule type: protein A; Residues: 1-20 <CUS>
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                                                                                                                                                                                             A; Accession: B5689
                                                                                                                                                                                                                    A; Contents: Sowerby, red brachiopod shells
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Query Match
Best Local Similarity
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Pred. No.
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Pred. No. 2.1e+03;
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Pred. No. 2.1e+03;
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Ir-ascorbate peroxidase (EC 1.11.11) isozyme II - spinach (fragment)
C;Species: Spinacia oleracea (spinach)
C;Species: Spinacia oleracea (spinach)
C;Accession: $32587; $15878
C;Accession: $32587; $15878
R;Kubo, A.; Saji, H.; Tanaka, K.; Tanaka, K.; Kondo, N.
Plant Mol. Biol. 18, 691-701, 1992
A;Title: Cloning and sequencing of a cDNA encoding ascorbate peroxidase from Arabidop A;Faccession: $32587
                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Gene: psaI
A;Genome: chloroplast
C;Keywords: chloroplast;
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A;Accession: PC7073
A;Molecule type: protein
A;Residues: 1-9 <TSU>
C;Keywords: brain; core protein; oxidoreductase
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Best Local Similarity
Watches 3; Conserv
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C;Genetics:
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A;Molecule type: DNA
A;Residues: 1-16 <SMA>
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C;Species: chloroplast Gossypium hirsutum (upland cotton)
C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Sep-1999
C;Accession: T09741
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Reference number: Z16323
A; Accession: T09741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Am. J. Bot. 85, 1301-1315, 1998
A; Title: The tortoise and the hare: choosing between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R; Small, R.L.; Ryburn, J.A.; Cronn, R.C.; Seelanan,
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Best Local
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Pred. No. 2.5e
1; Mismatches
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2e+05;
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A;Title: Characterization of Ale-kDa nucleic-acid-binding fragment of nucleolin. A;Reference number: SO2808; MUID:89153087
A;Accession: SO2808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Molecule type: DNA
A;Residues: I-18 <KAN>
A;Cross-references: EMBL:X58080; NID:g12429; PIDN:CAA41109.1; PID:g12431
C;Superfamily: photosystem I P700 apoprotein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C:Species: Zea mays (maize)
C:Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change
C:Accession: S14661
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A;Residues: 1-17 <KUBA.
A;Residues: 1-17 <KUBA.
A;Residues: 1-17 <KUBA.
A;Residues: 1-18 < Takeuchi, E.; Kubo, A.; Sakaki, T.; Haraguchi, K.; Kawamura, Y.
A;Tanaka, K.; Takeuchi, E.; Kubo, A.; Sakaki, T.; Haraguchi, K.; Kawamura, Y.
Arch. Biochem. Biophys. 286, 371-375, 1991
A;Title: Two immunologically different isozymes of ascorbate peroxidase from spinach lea
A;Reference number: S15878; MUID:91378325
A;Accession: S15878
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Best Local Similarity
"---hes 5; Conserva
                                                                                                                                                                                              A; Molecule type: protein A; Residues: 1-19 <SAP>
                                                                                                                                                                                                                                                                                                                               nucleolin - bovine (fragment)
C;Species: Bos primigenius taurus (cattle)
C;Date: 28-Feb-1990 #sequence_revision 28-Feb-1990 #text_change 18-Jun-1993
C;Accession: S02808
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A;Residues: 1,3-17 <TAN>
A;Rosidues: 1,3-17 <TAN>
A;Note: this sequence has been revised in
C;Keywords: chloroplast; oxidoreductase
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lipoprotein TagA precursor - Vibrio cholerae (fragment)
C;Species: Vibrio cholerae
C;Date: 18-Oct-1991 #sequence_revision 18-Oct-1991 #text_change 31-Dec-1993
C;Accession: A39108
C;Accession: A39108
R;Parsot, C; Taxman, E; Mekalanos, J.J.
Proc. Natl. Acad. Sci. U.S.A. 88, 1641-1645, 1991
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A39108
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S51066
                                                                         A;Molecule type: DNA
A;Residues: 1-25 <PAR>
A;Cross-references: GB:M60658
C;Reywords: lipid binding; lipoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eur. J. Biochem. 226, 169-177, 1994
A; Title: Purification and characterization
A; Reference number: S51053; MUID:95045586
A; Accession: S51066
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Best Local Similarity
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A;Accession: A39108
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A; Residues: 1-21 <TSI>
A; Note: the source is designated as Thermus
C; Keywords: protein biosynthesis; ribosome
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Species: Thermus aquaticus
C;Date: 15-Jul-1995 #sequence_revision 01-Nov-1996 #text_change 01-Nov-1996
C;Accession: S51066
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S57286
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pred. No. 3.2e+03
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Db 1 HYVRYSILMKV 11

RESULT 25
S68642
RESULT 25
S68642
RICCURS nigrocinctus (black-banded coral snake (fragment) C; Species Micrurus nigrocinctus (black-banded coral snake)
C; Date: 23-Jul-1997 #sequence_tevision 29-Aug-1997 #text_change 17-Mar-1999
C; Accession: S68642
R; Alape-Giron, A.; Stiles, B.; Schmidt, J.; Giron-Cortes, M.; Thelestam, M.; Joernvall, FEBS Lett. 380, 29-32, 1996
A; Title: Characterization of multiple nicotinic acetylcholine receptor-binding proteins A; Reference number: S68639; MUID:96181662
A; Title: Characterization of fmultiple nicotinic acetylcholine receptor-binding proteins A; Reference number: S68639; MUID:96181662
A; Title: Characterization of fmultiple nicotinic acetylcholine receptor-binding proteins A; Residues: 1-25 CALA>
D; Residues: 1-25 CALA>
Ouery Match
A; Residues: 1-25 CALA>
Ouery Match
Best Local Similarity 66.7%; Pred. No. 3.9e+03; Length 25; Best Local Similarity 66.7%; Pred. No. 3.9e+03; Length 25; Best Local Similarity 66.7%; Pred. No. 3.9e+03; Local Similarity 66.7%; Pred. No
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Maximum Match 1008
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 SwissProt_39:*
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Copyright (c) 1993 - 2000 Compugen Ltd
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 2222111 222111 22211112222
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DCMM_PSECF
SLAP_BACTG
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HEMI_THETS
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PSEN_SYNVU
AMP_FUSNU
BUK_CLOPA
UBLI_MONDO
DHAB_COWTE
NS2_MYCTU
CLFD_HORVU
CLFP_HORVU
UBLI_BOVIN
AL18_CARMA
URE3_MORMO
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AL12_CYDPO
CAOS_RAT
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Y15_BPT3
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19.831 Million cell updates/sec
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P09472 scyliorhinu
P80578 hydra atten
P56239 litoria cae
P56240 litoria cae
P37356 bacillus th
P81037 oncorhynchu
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P19914 pseudomonas
P49325 bacillus th
P19662 lactobacill
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P48883
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5 bacteriopha
7 clostridium
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PA2B_VIPBO	SAP_STOVA	PGLR_DIAAB	AL12_CARMA	COXJ_ONCMY	PKI2_SOLTU	IRBP_PIG	FLB1_TREHY	IRBP_SHEEP	CRTC_CANFA	CR34_LITCE	CR31_LITSP
		P81179 diaprepes a	P81815 carcinus ma	P80333 oncorhynchu	P24744 solanum tub	P12662 sus scrofa	P80158 treponema h	P12663 ovis aries	P28490 canis famil		P56238 litoria spl

### ALIGNMENTS

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RESULT 1

MCRA_METTE
ID 10.1AGG-1991 (Rel. 19, Created)
DT 01.AUG-1991 (Rel. 19, Last sequence update)
DT 01.AUG-1991 (Rel. 19, Created)
DT 01.AUG-1991 (Rel. 19, Last sequence update)
DT 01.AUG-1991 (Rel. 19, Created)
DT 01.AUG-1991 (Rel. 19, Last sequence update)
DEGRADATION OF METHYL COENZYME M methylreductas.
THOM METHANOGENESIS, WHICH IS THE TERMINAL STEP OF ANAEROBIC
DEGRADATION OF BLOMASS.
C-1-CATALYTIC ACTIVITY: REDUCTION OF METHYL-COENZYME M (2-(METHY)
CC 1-CATALYTIC ACTIVITY: REDUCTION OF METHYL-COENZYME M (2-(METHY)
CC 1-CATALYTIC ACTIVITY: REDUCTION OF METHYL-COENZYME M (2-(METHY)
CC 1-CATALYTIC ACTIVITY: REDUCTIVE BINDS TIGHTLY (BUT NOT COVALENT TO ONE MOLECULE OF COENZYME F430 IS A YELLOW NICKEL COMPLEX BINDS TIGHTLY (BUT NOT COVALENT TO ONE MOLECULE OF COENZYME F430. F430 IS A YELLOW NICKEL OF COENZYME.
CC 1-COEACTORS: THE ENVYME COMPLEX BINDS TIGHTLY (BUT NOT COVALENT TO ONE MOLECULE OF COENZYME F430. F430 IS A YELLOW NICKEL OF COENZYME.
CC 1-COEACTORS: THE ENVYME COMPLEX BINDS TIGHTLY (BUT NOT COVALENT TO ONE MOLECULE OF COENZYME F430. F430 IS A YELLOW NICKEL OF COENZYME.
CC 1-COENCELARBOUS: TERDUCTIVELY REACTIVITY I DEGREES CELLSHOWS: REDUCTIVELY REACTIVAT ENVYMENCE ON THE TERMINAL TEMPERATURE FOR ENZYME ACTIVITY I DEGREES CELLARBOUS: TERMINAL TEMPERATURE FOR E
DCMM_PSECF
ID DCMM_PSECF
ID DCMM_PSECF
AC P19914;
DT 01-FEB-1991
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A Jablonski P.E., Ferry J.G.;

A Jablonski P.E., Ferry J.G.;

T "Purification and properties of methyl coenzyme M methylreductase from acetate-grown Methanosarcina thermophila.";

J. Bacteriol. 173:2481-2487(1991).

C -1- FUNCTION: THIS ENZYME COMPLEX CATALYZES THE FINAL STEP IN METHANOGENESIS, WHICH IS THE TERMINAL STEP OF ANAEROBIC DEGRADATION OF BIOMASS.

C -1- GUARDATION OF BIOMASS.

C -1- CATALYTIC ACTIVITY: REDUCTION OF METHYL-COENZYME M (2-(METHYLTHIO) ETHANESULFONIC ACTIVITY: REDUCTION OF METHYL-COENZYME M (2-(METHYLTHIO) ETHANESULFONIC ACTIVITY: REDUCTION OF METHYL-COENZYME M (2-(METHYLTHIO) C COMPLEX AND AN HETERODISULFIDE (CH(3)-S-COM + H-S-HTP - CH(4) + C COM-S-S-HTP).

C -1- COPACTOR: THE ENZYME COMPLEX BINDS TIGHTLY (BUT NOT COVALENTLY) C COPACTOR: THE ENZYME COMPLEX BINDS TIGHTLY (BUT NOT COVALENTLY)
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Best Local Similarity 50.1
Matches 7; Conservative
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-!- SUBUNIT: TRIMER OF AN ALPHA, A BETA, AND A GAMMA SUBUNITS.

-!- MISCELLANEOUS: THE OPTIMAL TEMPERATURE FOR ENZYME ACTIVITY IS DEGREES CELSIUS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Methanosarcina thermophila.
Archaea; Euryarchaeota; Methanosarcinales; Methanosarcinaceae;
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(Rel. 17, Last sequence update)
(Rel. 24, Last annotation update)
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RESULT 3
SLAP_BACTG
ID SLAP_BACTG
AC P49325;
DT 01-FEB-1996
DT 01-FEB-1996
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OS Bacillus th
OC Bacteria; FI
OC Bactllus/Stc
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RM IT SACTETION
CC -i- FUNCTION
CC -i- SUBCELLA
CC -i- SUBCELLA
CC -i- SUBCELLA
CC C-i- SUBCE
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DT 01-FE
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  UDP_LACCA
P19662;
01-FEB-1991
01-FEB-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Luckevich M.D., Beveridge T.J.;
"Characterization of a dynamic S layer on Bacillus thuringlensis.";
J. Bacteriol. 171:6656-667(1989).
-!- FUNCTION: THE S-LAYER IS A PARACRYSTALLINE MONO-LAYERED ASSEMBLY
-!- FUNCTION: WHICH COAT THE SURFACE OF BACTERIA.
-!- SUBCELLULAR LOCATION: CELL WALL. THIS BACTERIUM IS COVERED BY A
S-LAYER WITH OBLIQUE (P2) SYMMETRY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
01-FEB-1996 (Rel. 33, Last annotation update)
S-LAYER PROTEIN (SURFACE LAYER PROTEIN) (FRAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kraut M., Hugendieck I., Herwig S., Meyer O.;
"Homology and distribution of CO dehydrogenase structural genes carboxydotrophic bacteria.";
Arch. Microbiol. 152:335-341(1989).
-i- CAPALYTIC ACTIVITY: CO + H(2)O + ACCEPTOR = CO(2) + REDUCED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bacillus thuringiensis (subsp. galleriae).
Bacteria; Firmicutes; Bacillus/Clostridium group;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pseudomonas carboxydoflava.
Bacteria; Proteobacteria; b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=90078111; PubMed=2592346;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-NRRL 4045;
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[1]
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COFACTOR: MOLYBDENUM.

SUBUNIT: CONSISTS OF THREE POLYPEPTIDE CHAINS: LARGE, MEDIUM,
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5; Conservative
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10 AA; 1
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(Rel. 17, Creat (Rel. 17, Last
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1080 MW;
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  sequence update)
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Pred. No.
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1; Mismatches 1
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Query Match Best Local Similarity

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CT31_LITCI SFALL...
P81851; P81852; P81853;
p81851; P81852; P81853;
30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
30-MAY-2000 (Rel. 39, Last annotation update)
CITROPIN 3.1.2 [CONTAINS: CITROPIN 3.1].
Litoria citropa (Australian blue mountains tree frog).
Litoria citropa (Australian blue mountains tree frog).
CITROPIN 3.1.2 [CONTAINS: CITROPIN 3.1].
Litoria citropa (Australian blue mountains tree frog).
Wegener K.L., Wabnitz P.A., Carver J.A., Bowie J.H., Chia B.C.S., Wallace J.C., Tyler M.J.;

### Host defence peptides from the skin glands of the Australian blue mountains tree-frog Litoria citropa. Solution structure of the mountains tree-frog Litoria citropa. Solution structure of the matibacterial peptide citropin 1.1.";

### EURIC PEPTIDE 1 24 CITROPIN 3.1.1.

### PEPTIDE 1 22 CITROPIN 3.1.1.
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"Purification and characterization of uridine and thymidine phosphorylase from Lactobacillus casei.";

Biochim. Biophys. Acta 1040:287-293(1990).

-I- FUNCTION: THE ENZYMES WHICH CATALYZE THE REVERSIBLE PHOSPHORYLOSIS OF PYRIMIDINE NUCLEOSIDES ARE INVOLVED IN THE DEGRADATION OF THESE COMPOUNDS AND IN THEIR UTILIZATION AS CARBON AND ENERGY SOURCES, OR IN THE RESCUE OF PYRIMIDINE BASES FOR NUCLEOTIDE SYNTHESIS.

-I- CATALYTIC ACTIVITY: URIDINE + PHOSPHATE - URACIL + ALPHA-D-RIBOSE
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INTERPRO; IPRO00845; -.
PROSITE; PS01232; PNP_UDP_1; PARTIA
Transferase; Glycosyltransferase.
Transferase; 1 1 0R S.
OR S.
OR T.
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-1- SUBUNIT: HOMOTETRAMER.
-1- SIMILARITY: BELONGS TO THE PNP/UDP FAMILY 1 OF PHOSPHO
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MEDLINE-90381286; PubMed-2119230;
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URIDINE PHOSPHORYLASE
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01-MAR-1989 (Rel. 10, Last sequence update)
01-MAR-1992 (Rel. 21, Last anotation update)
01-MAR-1992 (Rel. 21, Last anotation update)
GASTRIN-RELEASING PEPTIDE (GRP).
Scyliorhinus canicula (Spotted dogfish) (Spotted catshark).
Eukaryota: Metazoa: Chordata; Craniata; Vertebrata; Chondrichthyes;
Elasmobranchii; Galeomorphii; Galeoidea; Carcharhiniformes;
scyliorhinidae; Scyliorhinus.
Morphogen.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIINE-88137922; PubMed-3436516; Conlon J.M., Henderson I.W., Thim L.; Conlon J.M., Henderson I.W., Thim L.; Control J.M., Henderson I.W., Thim L.; Control Servin-releasing peptide from the intestine of the fish, Scyllorhinus canicula (common dogfish)."; Gen. Comp. Endocrinol. 68:415-420(1987).

1- FUNCTION: GRP STIMULATES GASTRIN RELEASE AS WELL GASTROINTESTINAL HORMONES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GRP_SCYCA
P09472;
                              peptides from Hydra vulgaris.";
Development 122:1941-1948(1996).
-i- FUNCTION: MORPHOGENETICALLY ACTIVE
                                                       "Isolation and characterization of two
                                                                                                                                                                                                    PEDI_HYDAT P80578;
                                                                                                                                                                                                                                                                                                                                                                                 PFAM; PF02044; Bombesin; 1.
PROSITE; PS00257; BOMBESIN;
Bombesin family; Amidation.
MOD_RES 25
                                                                                       MEDLINE-96232307; PubMed-8674432;
                                                                                                                         Hydridae;
                                                                                                                                  Hydra attenuata (Hydra) (Hydra vulgaris).
Eukaryota; Metazoa; Cnidaria; Hydrozoa; H
                                                                                                                                                                                                                                                                                                                                                                                                                             INTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SIMILARITY: BELONGS TO THE BOMBESIN/NEUROMEDIN B/RANATENSIN
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4; Conserv
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(Rel. 34, Last sequence up)
(Rel. 34, Last annotation
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<u>Α</u>,
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2781 MW;
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Pred. No.
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B735F911B89007F8 CRC64;
6F5266E3F37632CB
                                                                                                                                  Hydrozoa; Hydroida;
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8e+02;
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Query Match

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DT 11-JUL
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Matches 4; Conserv
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Best Local Similarity
Matches 3; Conser
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P56239;
15-JUL-1998 (Rel.
15-JUL-1998 (Rel.
15-JUL-1998 (Rel.
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15-JUL-1998
15-JUL-1998
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CAERIN 3.3.
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                                                                 Litoria caerula.";

J. Chem. Res. 138:910-936(1993).

J. Chem. Res. 138:910-936(1993).

J. Chem. Res. 138:910-936(1993).

J. Chem. Res. 138:910-936(1993).

CONFORMATION: ANTIBACTERIAL PEPTIDE, THAT ADOPTS AN ALPHA HELICAL ROUTE BACTERIAL MEMBRANES. EACH CAERU CONFORMATION WHICH CAN DISRUE SPECIFICITY.

DISPLAYS A DIFFERENT ANTIMICROBIAL SPECIFICITY.

TISSUE SPECIFICITY: SECRETED BY THE SKIN PAROTOID AND/OR ROSTF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -i- MASS SPECTROMETRY: MW-2397; METHOD-FAB
Antibiotic; Amphibian skin; Amidation.
MOD_RES 22 22 AMIDATION.
SEQUENCE 22 AA; 2400 MW; 1D440B3829D438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Litoria caerula.";

J. Chem. Res. 138:910-936(1993).

-I- FUNCTION: ANTIBACTERIAL PEPTIDE, THAT ADOPTS AN ALPHA HELICAL-
CONFORMATION WHICH CAN DISRUPT BACTERIAL MEMBRANES. EACH CAER:
DISPLAYS A DIFFERENT ANTIMICROBIAL SPECIFICITY.
                                                                                                                                                                                                         TISSUE-PAROTOID GLAND;
Stone D.J.M., Waugh R.J., Bowie J.H.,
"Peptides from Australian frogs. The s
                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata;
Amphibia; Batrachia; Anura; Ne
Litoria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Peptides from Australian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Amphibia; Batrachia;
-!- MASS SPECTROMETRY: MW-2424; METHOD-FAB Antibiotic; Amphibian skin; Amidation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE, AND MASS SPE
TISSUE-PAROTOID GLAND;
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                                                                                                                                                                                                                                                                                       SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                       Litoria caerulea.
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. 36, Last sequ
. 36, Last anno
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36, Last sequence up
36, Last annotation
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37.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Amidation.
AMIDATION.
1D440B3829D4367C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a; Craniata; Vertebrata; Euteleostomi;
Neobatrachia; Bufonoidea; Hylidae;
                                                                                                                                                                                                                                                                                                                                                         Neobatrachia;
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Pred. No. 1.5e
4; Mismatches
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3; Mismatches
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                                                                                                                                                                                                                 Wallace J.C., structures of
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1.5e+03;
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                                                                                                                                                                                                                 , Tyler M.J.;
the caerins from
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                                                                        AND/OR ROSTRAL
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Best Local
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Best Local Similarity
Matches 3; Conser
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SEQUENCE
                                                                                                                          01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
115-DEC-1998 (Rel. 37, Last annotation update)
MILTPAIN (EC 3.4.22.-) (FRACMENT).
Oncorhynchus keta (Chum salmon).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                  NON_TER
                                                                                                                                                                                                                                             ONCKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bacillus thermoglucosidasius.
Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Bacillus.
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01-OCT-1994 (Rel. 30, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
N-ACYL-L-AMINO ACID AMIDOHYDROLASE (EC 3.5.1.14) (L-AMINOACYLASE)
                                                                                                                     Protacanthopterygii;
                                                                                                                                                                                                                   MILT_ONCKE P81037;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Purification and characterization.";
Agric. Biol. Chem. 51:2793-2800(1987).
                                                                                 SEQUENCE, AND CHARACTERIZATION. MEDLINE=97397031; PubMed=9253183;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ANION + A L-AMINO ACID.
-!- COFACTOR: ACTIVATED BY COBALT (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cho H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE, AND CHARACTERIZATION
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                                   Comp.
                                             Oncorhynchus keta.",
                                                        Kawabata C., Ichishima E.;
"Miltpain, new cysteine proteinase
                                                                                                                                                                                                                                                                                                                                                                                                                        Hydrolase; Cobalt.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Thermostable aminoacylase from Bacillus thermoglucosidius
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                                                                                                                                                                                                                                                                                                                  12 KMFPEVKE 19
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P. Biochem. Physiol. 117B:445-452(1997).
FUNCTION: CYSTEINE PROTEINASE THAT HYDROLYSES BASIC PROTEINS.
HYDROLYZE BASIC PROTEINS SUCH AS HISTONE, SALMINE AND CLUPAIN NOT MILK CASEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBUNIT: HOMOTETRAMER.
                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY: BELONGS TO PEPTIDASE FAMILY M40, ALSO KNOWN AMA/HIPO/HYUC FAMILY OF HYDROLASES.
                                                                                                                                                                                                                                                                                           RLVDEVKE
                                                                                                                                                                                                                                                                                                                                        Similarity 4; Consert
                                                                                                                                                                                                                                                                                                                                                                                                 24
24 AA;
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AA;
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2846 MW;
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                                                                                                                    Salmoniformes;
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Pred. No.
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Pred. No. 1
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1D440B2200D4367C
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                                                            from
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                                                                                                                     Salmonidae;
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1.5e+03;
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1.7e+03
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CC Eukaryo
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RL23_HALCU
    RRR OCC GRE DT DAC
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P05975;
01-NOV-1988
01-NOV-1988
30-MAY-2000
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Ol-DEC-1992 (Rel. 24, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
15-JUL-1998 (Rel. 36, Last annotation update)
OVOHEMERYTHRIN (YP14) (FRAGMENT).
Theromyzon tessulatum (Leech).
Eukaryota, Metazoa; Annelida; Clitellata; Hirudinea;
Rhynchobdellida; Glossiphoniidae; Theromyzon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- CATALYTIC ACTIVITY: PREFERENTIAL CLEAVAGE WITH BASIC RESIDUES P2 AND P1.
MEROPS; C01.093; -.
Hydrolase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EUR. J. Blochem. 209:563-569(1992).

-i- EUNCTION: MAJOR YOLK PROTEIN. THIS IRON PROTEIN MAY PLAY A
IN THE DETOXIFICATION OF FREE IRON AFTER A BLOOD MEAL.

-i- SIMILARITY: BELONGS TO THE HEMERYTHRIN FAMILY.
PIR; S29264; S29264.

HSSP; P02247; 2MHR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-93049299; pubMed-1425663;
Baert J.-L. Britel M. Sautiere P.,
"Ovohemerythrin, a major 14-kDa yolk
vitellogenin in leech.";
MEDLINE-84282108; PubMed-6467081;
Matheson A.T., Yaguchi M., Christ
                                                 SEQUENCE
                                                                                                                      Halobacterium cutirubru Archaea; Euryarchaeota;
                                                                                                                                                                                           50S RIBOSOMAL
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PROSITE; PS00550; HEMERYTHRINS; PARTIAL.
OXYGEN transport; Metal-binding; Iron; Yolk.
NON_TER 18 18
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(Rel. 09, Last sequence update)
(Rel. 39, Last annotation update)
AL PROTEIN L23P (HL31) (FRAGMENT).
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Pred. No. 1.9e+03
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P33236;
01-FEB-1994
01-FEB-1994
15-JUL-1998
GEF_LEADER P
                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                         ECOGENE; EG12074; gefL.
Leader peptide.
SEQUENCE 19 AA; 2259
                                                                                                                                                                                                                                                                                                                                                Mau B., Shao Y.;
"The complete genome sequence of Escherichia coli K-12.";
Science 277:1453-1474(1997).
                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRALN=K12 / MG1655;
MEDLINE=97426617; PubMed=9278503;
Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V.
Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F.,
Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J.,
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                                                                                                                                               EMBL; AE000112; AAC73129.1; ALT_TERM PIR; S16473; S16473.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE-92048481; PubMed-1943701;
Poulsen L.K., Refn A., Molin S., Andersson P.;
"The gef gene from Escherichia coli is regulated at the level
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PIR; S08559; S08559.
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(Rel. 28, Last sequence update)
(Rel. 36, Last annotation update)
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DT 01-0CT-1989 0
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Bacteria; Fusobacteria;
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Bacteria; Cya
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                 19.6%;
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STRAIN-ATCC 10953;
MEDLINE-98361026; PubMed-9695913;
ROGERS A.H., Gunadi A., Gully N.J., Zilm P.
"An aminopeptidase nutritionally important
nucleatum.";
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MEDLINE-89338735; PubMed-2503398;
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(Rel. 12, Last sequence update)
(Rel. 29, Last annotation update)
II REACTION CENTER N PROTEIN (FRAGMENT).
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    Pred. No. 2.1e
4; Mismatches
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3; Mismatc
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RESULT 17
PEPILASPNG STANDARD; PRT; 24 AA.

ID PEPILASPNG STANDARD; PRT; 24 AA.

AC P55749;
DT 01-NOV-1997 (Rel. 35, Last sequence update)
OC chastyota Punds (Part Sequence update)
CC anamorphic Trichocomaceae; Aspergillus Seguence in C-terminal sequencing
Proteins and peptide synthesis:
RT from Aspergillus niger and their use in C-terminal sequencing
proteins and peptide synthesis:
RT from Aspergillus niger and their use in C-terminal sequencing
proteins and peptide synthesis:
RT from Aspergillus niger and their use in C-terminal sequencing
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01-FEB-1991
01-FEB-1991
01-FEB-1991
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                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity hes 5; Conser
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ETM: CONTAINS BOTH N- AND O-LINKED SUGAR CHAINS. THE N-LINKED PATH: CONTAINS BOTH N- AND O-LINKED SUGAR CHAINS. THE N-LINKED OLIGOSACCHARIDES ARE UNIQUE STRUCTURES OF MAN(10)GLCNAC(2) AND MAN(11)GLCNAC(2). DEGLYCOSYLATION DOES NOT AFFECT THE CATALYTIC ACTIVITY, PH OR THERMAL STABILITY, OR RESISTANCE TO PROTEOLYSIS
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CATALYTIC ACTIVITY: RELEASE OF A C-TERMINAL AMINO ACID WITH
                                                                                                                                                                                                                                                                                              TNKTARFLVNGTSIPEV
                                             (Rel.
(Rel.
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L GENE
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Last annotation updat
PROTEIN.
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Pred. No. 2.5e
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P81337;
15-JUL-1998 (Rel.
15-JUL-1998 (Rel.
15-JUL-1998 (Rel.
BUTYRATE KINASE (
                                                                                                                                                                                                                                                                                                               Plengsrud R., Skjeldal L.,
"Two-dimensional gel electrophoresis separation and N-terminal
sequence analysis of proteins from Clostridium pasteurianum W5.";
Electrophoresis 19:802-806(1998).
-i- FUNCTION: CATALYSES THE CONVERSION OF BUTYRYL-COA THROUGH BUTYRYL
-i- FUNCTION: CATALYSES THE CONVERSION OF BUTYRYL-COA THROUGH BUTYRYL
-i- FUNCTION: CATALYSES THE CONVERSION OF BUTYRYL-COA THROUGH BUTYRYL
-i- CATALYTIC ACTIVITY: ATP + 2-BUTANOATE = ADP + BUTANOYL PHOSPHATE.
-i- PATHWAY: INVOLVED IN THE ACIDOGENIC PHASE OF FERMENTATION.
-i- SIMILARITY: BELONGS TO THE ACETOKINASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; x17255; CAA35126.1; -. EMBL; x05031; CAA28701.1; -. FIR; S09540; S09540.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Clostridium pasteurianum.
Bacteria; Firmicutes; Bacillus/Clostridium group; Clostridiaceae;
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                                                                                                                                                                                                                              PROSITE; PS01075; ACETATE_KINASE_1; PROSITE; PS01076; ACETATE_KINASE_2;
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NASE (EC 2.7.2.7) (BK) (CP 38) (FRAGMENT).
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DHAB COMTE

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P80704;

T 01-OCT-1996 (Rel. 34, Created)

T 01-OCT-1996 (Rel. 37, Last sequence update)

DT 15-DEC-1998 (Rel. 37, Last annotation update)

DE ALDEHYDE DEHYDROGENASE, BETA CHAIN (EC 1.2.99.3) (AL Comamonas testosteroni).

Comamonas testosteroni (Pseudomonas testosteroni).
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"5" untranscribed region of the neural-specific ubiquitin C-terminal
"7" hydrolase (pGp9.5) gene.";
"8" J. Neurochem. 66:35-46(1996).
"9" FUNCTION: UBIQUITIN-PROTEIN HYDROLASE IS INVOLVED BOTH IN THE
"9" PROCESSING OF UBIQUITIN PRECURSORS AND OF UBIQUINATED PROTEINS."
"1" FUNCTION: THIOLOUSE THAT RECOGNIZE AND HYDROLYZE
"1" PROCESSING OF UBIQUITIN PROTEASE THAT RECOGNIZE AND HYDROLYZE
"1" PROCESSING OF UBIQUITIN PROTEASE THAT RECOGNIZE AND HYDROLYZE
"1" CAPACITIC BOND AT THIS C-TERMINAL GLYCINE OF UBIQUITIN CONTINUES."
"1" CAPACITIC ACTIVITY: UBIQUITIN C-TERMINAL THIOLESTER + H(2)O =
"1" SUBCELLULAR LOCATION: CYTOPLASMIC.
"1" SUBCELLULAR LOCATION: CYTOPLASMIC.
"1" SIMILARITY: BELONGS TO PEPTIDASE FAMILY C12; ALSO KNOWN AS
"1" FAMILY 1 OF UBIQUITIN CARBOXYL-TERMINAL HYDROLASES."
                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 4; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
01-OCT-1997 (Rel. 35, Last annotation update)
01-INOV-1997 (Rel. 35, Last annotation update)
UBIQUITIN CARBOXYL-TERWINAL HYDROLASE ISOZYME L1 (EC 3.1.2.15) (UCH-L1) (UBIQUITIN THIOLESTERASE L1) (PGP 9.5) (FRAGMENT).
                                                                                                                                                                                              COMTE
                                                                                                                                                                                                                                                                                                                                                                                                                                    Ubiquitin conjugation; Hydrolase; NON_TER 15 15 SEQUENCE 15 AA; 1816 MW; 1B7A:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; U32208; AAA89059.1; -. INTERPRO; IPRO01578; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Monodelphis domestica (Short-tailed grey opossum).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Metatheria; Didelphimorphia; Didelphidae; Monodelphis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-96102916; PubMed-8522974;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00140; UCH_1; PARTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mann D.A.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                    1816 MW; 1B7A3B6E623F6E79 CRC64;
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26.7%;
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Pred.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Thiol protease; Multigene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F.L., Whittaker
                                                                                                                                                                                                                                                                                                                                                           19;
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                                          Comamonadaceae; Comamonas
                                                                                                                                                                                                                                                                                                                                         7; Indels
                                                                                                                                                                                                                                                                                                                                                                              Length 15;
                                                                             (ALDH) (FRAGMENT).
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RESULT 22
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Best Local S
Matches 3
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Best Local Similarity
Matches 5; Conserv
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P81136;
15-JUL-1999 (Rel. :
15-JUL-1999 (Rel. :
15-JUL-1999 (Rel. :
                                                                                                        CH60_ACICA STAN
P81874;
30-MAY-2000 (Rel. 3
30-MAY-2000 (Rel. 3
30-MAY-2000 (Rel. 3
60 KDA CHAPERONIN (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [1]
SEQUENCE.
STRAIN-ATCC 15667;
STRAIN-ATCC 15667;
LUYXX D.M.A.M., Kim S.W., de Vries S., Duine J.A.;
Submitted (JUL-1996) to the SWISS-PROT data bank.
-i- CATALYTIC ACTIVITY: AN ALDEHYDE + ACCEPTOR + H.
REDUCED ACCEPTOR.
-i- COFACTOR: MOLYBDENUM.
-i- COFACTOR: MOLYBDENUM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NON_TER
                                                                                                                                                                                                                                                                                                                    AND H.INFLUENZAE
NON_TER 19 1
SEQUENCE 19 AA; 22
                                                                         MOPA OR GROEL.
Acinetobacter calcoaceticus.
Bacteria; Proteobacteria; ga
                                                                                                                                                                            _ACICA
                                                                                                                                                                                                                                                                                                                                                      Prasad H.K., Annapurna P.S.;
Submitted (DEC-1997) to the SWISS-PROT data
-i- SIMILARITY: STRONG, TO THE N-TERMINALS
MEDLINE-99274045; PubMed-10344248; Benndorf D., Loffhagen N., Babel W "Induction of heat shock proteins i
                                  SEQUENCE.
STRAIN-69-V;
                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE.
STRAIN-H37RV;
                                                                                                                                                                                                                                                                                                                                                                                                                      Mycobacterium tuberculosis.
Bacteria; Firmicutes; Actinobacteria;
Actinomycetales; Corynebacterineae; My
                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-JUL-1999 (Rel. 38, Created)
15-JUL-1999 (Rel. 38, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
30 KDA NON-SECRETORY PROTEIN 2 (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oxidoreductase; Molybdenum
                                                                 Acinetobacter.
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                                                                                                                                                                                                                      11 VAEFSFF
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                                                                                                                                                                STANDARD;
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                                                                                                         39, Created)
39, Last sequence update)
39, Last annotation update)
(PROTEIN CPN60) (GROEL PROTEIN) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                       2211
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19
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42.9%;
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                                                                         gamma
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Pred. No. 2.9e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 19;
Pred. No.
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                                                                                                                                                                PRT;
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                                                                           subdivision;
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Mycobacteriaceae; N
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1.9e+03;
3;
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.9e+03
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                                                                           Moraxellaceae
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                                                                                                                                                                                                                                                                                     Length 19;
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 primary alcohols in
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Best Local !
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P48883;
01-FEB-1996 (Rel. 33
01-FEB-1996 (Rel. 33
01-NOV-1997 (Rel. 35
PROBABLE CLPP-LIKE F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chaperone;
NON_TER
SEQUENCE
                    INTERPRO; IPRO0190/;
INTERPRO; IPRO0381; CLP_PROTEASE_SER; PART:
PROSITE; PS00382; CLP_PROTEASE_HIS; PART:
PROSITE; PS00382; CLP_PROTEASE; Chloroplast.
                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or.send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                             plastids.";
Plant Mol. Biol. 30:109-123(1996).
-!- CATALYTIC ACTIVITY: HYDROTYCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Accinetobacter calcoaceticus,";
Electrophoresis 20:781-789(199).
-i- FUNCTION: PREVENTS MISFOLDING AND PROMOTES THE REFOLDING
PROPER ASSEMBLY OF UNFOLDED POLYPEPTIDES GENERATED UNDER
CONDITIONS (BY SIMILARITY).
-1- SUBUNIT: OLIGOMER OF 14 SUBUNITS COMPOSED OF TWO STACKED
7 SUBUNITS (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-CV. HAISA;
MEDLINE-96197402; PubMed-8616228;
Huebbschmann T., Hess W., Boerner T.;
"Impaired splicing of the rps12 transcript in ribosome-deficient
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chloroplast
Eukaryota; \
                                                                                     MENDEL;
                                                                                                 EMBL; X89562; CAA61738.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Magnoliophyta; Lillopsida; Poales; Poaceae; Hordeum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HORVU
  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hordeum vulgare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 80.
nes 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 AMMIA 9
                                                                                                                                                                                                                                                      CATALYTIC ACTIVITY: HYDROLYSIS OF PROTEINS TO SMALL PEPTIDES IN THE PRESENCE OF ATP AND MAGNESIUM, ALPHA-CASEN IS THE USUAL TE SUBSTRATE. IN THE ABSENCE OF ATP, ONLY OLIGOPEPTIDES SHORTER TH FIVE RESIDUES ARE CLEAVED (SUCH AS SUCCINYL-LEU-TYR-|-NHMEC; AN LEU-TYR-LEU-|-TYR-TRP, IN WHICH THE CLEAVAGE OF THE -TYR-|-LEU-AND -TYR-|-TRP- BOND ALSO OCCURS).

SIMILARITY: BELONGS TO PEPTIDASE FAMILY S14; ALSO KNOWN AS CLPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMMIA
                                                                      2297; HORvu;clpP;1.
O; IPR001907; -.
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24 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Viridiplantae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Rel. 33, Created)
(Rel. 33, Last sequence update)
(Rel. 35, Last annotation update)
(Rel. 35, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Barley).
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  2941
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80.0%;
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l; Mismatches
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 715EB01FE3E073CE CRC64;
                                         PARTIAL.
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STRESS
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Search completed: February Job time: 498 sec

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2001, 10:55:58

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RESULT 25
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Best Local S
Matches 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UBL1_BOVIN
P23356;
01-NOV-1991
                                                                                                                                                                                                                                                                                                                                                                               -!- SUBCELLULAR LOCATION: CYTOPLASMIC.
-!- TISSUE SPECIFICITY: NEURONS AND CELLS OF NEUROENDOCKINE SYSTEM AND THEIR TUMORS.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY PAMILY 1 OF UBIQUITIN CARBOXYL-TERMINAL PIR; S17561: S17561.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1991 (Rel. 20, Created)
01-NOV-1991 (Rel. 20, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
UBIQUITIN CARBOXYL-TERMINAL HYDROLASE ISOXYME L1 (EC
L1) (UBIQUITIN THIOLESTERASE L1) (NEURON CYTOPLASMIC
                                                                                                                                                                                                                            Bos taurus (Bovine).
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEBS Lett.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (PGP 9.5) (FRAGMENT).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14 FPEV 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FUNCTION: UBIQUITIN-PROTEIN HYDROLASE IS INVOLVED BOTH IN THE PROCESSING OF UBIQUITIN PRECURSORS AND OF UBIQUINATED PROTEINS THIS ENZYME IS A THIOL PROTEASE THAT RECOGNIZE AND HYDROLYZE A PEPTIDE BOND AT THE C-TERMINAL GLYCINE OF UBIQUITIN.

CATALYTIC ACTIVITY: UBIQUITIN C-TERMINAL THIOLESTER + H(2)O -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              UBIQUITIN + A THIOL
MQLKPMEIDPEMLNK 15
                                                  MMIARFKMFPEVKEK 20
                                                                                                  similarity 26.
4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
3; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18.6%;
75.0%;
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O9r4w0 campylobact
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ALIGNMENTS

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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10095;
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INTERLEUKIN-2 (FRAGMENT).
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Q9RGR1;
01-MAY-2000 (TIEMBLIEL 13,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INTERLEUXIN-2 (...
Mus musculus (Mouse).
Mus musculus (Motazoa; Chordata;
Metazoa; Rodentia;
Metazoa; Rodentia;
filamentous hemagglutinin ar
Submitted (DEC-1998) to the
EMBL; AF111798; AAF21948,1;
                                                Relman D.A.;
"Molecular characterization of the Bordetella bronchiseptica "Molecular characterization and its secretion machinery.";
filamentous hemagglutinin and its secretion machinery.";
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                                                                                                                                                                                                                                                                                                                                                                                                                            Bacteria; Proteobacteria;
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                                                                                                                                                                                                Jacob-Dubuisson F.,
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1 MYSMQLA 7
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4; Conserv
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E 22 AA;
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57.1%;
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2; Mismatches
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Last sequence up
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Pred. No.
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01-NOV-1996 (TrEMBLrel. 01, Las
01-NOV-1996 (TrEMBLrel. 01, Las
101-NOV-1996 (TREMBLREL. 01, Cre
101-NOV-1996
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Q9JJU5;
01-OCT-2000 (
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Curr. Genet. 27:0-0(0).
EMBL; U28355; AAA70034.1; -.
Hypothetical protein; Mitochondrion.
Hypothetical protein; Mitochondrion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                specific expression.";
Submitted (MAR-2000) to the
EMBL: AJ276308; CAB81556.1;
                                                                                                                                                                                                                                                                                                                            Barnier J.V., Papin C., Eychene A., Lecoq O., Calothy G.; "The mouse B-raf gene encodes multiple protein isoforms with tissue-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-OCT-2000 (TremBLrel. 15, 01-OCT-2000 (TremBLrel. 15, 01-OCT-2000 (TremBLrel. 15, B-RAF PROTEIN (FRAGMENT).
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NCBI_TaxID=41045;
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1; Mismatches
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                                                                                                                               Q00340 PRELIMINARY; PRT; 17 AA. Q00340; O1-MAY-2000 (TrEMBLrel. 01, Created) O1-MAY-2000 (TrEMBLrel. 13, Last sequence update) O1-MAY-2000 (TrEMBLrel. 13, Last annotation update) HYPOTHETICAL PROTEIN IN O2L 3 REGION (FRAGMENT).
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SEQUENCE
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01-NOV-1996 (TrEMBLrel. 01, Created
01-NOV-1996 (TrEMBLrel. 01, Last so
01-NOV-1998 (TrEMBLrel. 08, Last an
REOVIRUS SEROTYPE 3 L1 (FRAGMENT).
                                                                                                                                                                                                                                                                                             Ryazankina O.I., Shchelkunov S.N., Muravlev
Mikryukov N.N., Gutorov V.V., Nikulin A.E.,
Malygin E.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vaccinia virus (strain L-IVP)
Viruses; dsDNA viruses, no RN
                                                                                                                                                                                                                                                                                                                                                                                        STRAIN-L-IVP;
                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Orthopoxvirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (strain Dearing).";
Virology 121:307-319(1982).
EMBL; J02313; AAA47269.1; -.
NON_TER 17 17
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MEDLINE-83017876; PubMed-6927854;
Antczak J.B., Chmelo R., Pickup D.J., Joklik
"Sequence at both termini of the 10 genes of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Sequences of ribosome binding sites reovirus mRNA.";
J. Virol. 42:467-473(1982).
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Viruses; dsRNA_viruses; Reoviridae;
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  Score 23; DB 12;
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Pred. No. 2.7e+03;
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O9R4W0;
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O1-MAY-2000 (TrEMBLrel. 13, Created)
O1-MAY-2000 (TrEMBLrel. 13, Last sequence update)
O1-JUN-2000 (TrEMBLrel. 14, Last annotation update)
64 KDA HEAT SHOCK- AND ALKALINE PH-INDUCED PROTEIN (FRAGMENT).
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Wu Y.L., Lee L.H., Rollins D.M., Ching W.M.;

"Heat shock- and alkaline pH-induced proteins of Campylobacter

characterization and immunological properties.";

Infect. Immun. 62:4256-4260(1994).

SEQUENCE 20 AA; 2339 MW; ODDE08352969DEA7 CRC64;
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01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAY-2000 (TrEMBLrel. 13, Last annotation update)
EXTRACTABLE ANTIGEN 1 (FRAGMENT).
005279 PRELIMINARY.
005279;
01-JUL-1997 (TrEMBLrel.
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Campylobacter.
NCBI_TaxID-197;
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Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Bacillus.
NCBI_TaxID-1392;
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Schaller A., Kuhn R., Kuhnert P., Nicol
MacInnes J.I., Segers R.P.A.M., Frey J.
"Characterization of apxIVA, a new RTX
pleuropneumoniae.";
pleuropneumoniae.";
Microbiology 145:2105-2116(1999).
EMBL; AF021919; AAD0199.1; -.
NON TER
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SEQUENCE 22 AA; 2995 MW;
                                                                                                                                                                                               Q62966;
Q62966;
                                                                    01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last seq
01-NOV-1998 (TREMBLrel. 08, Last ann
INTERSTITIAL COLLAGENASE (FRAGMENT).
Rattus norve; icus (Rat).
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09S551;
01-MAY-2000 (TEMBLrel. 13, Created)
01-MAY-2000 (TEMBLrel. 13, Last sequence update)
01-MAY-2000 (TEMBLrel. 13, Last annotation update)
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                      Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
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STRAIN-4074;
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NCBI_TaxID=715;
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Bacteria; Proteobacteria; gamma subdivision; Pasteurellaceae;
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                                                                                                                                                                                                                           PRELIMINARY;
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                                                                                                                     01, Created)
01, Last sequence update)
08, Last annotation update)
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EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 23; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         762A86A651B6D3BB CRC64;
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B; Mismatches
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                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
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3.5e+03;
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Attention

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Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                Q35921 PRELIMINARY;
Q35921;
01-NOV-1996 (TrEMBLrel. 0)
01-NOV-1996 (TrEMBLrel. 0)
01-NOV-1998 (TrEMBLrel. 0)
MITCCHONDRIAL ATPASE 6 (F)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2000 (TrEMBLrel. 14, Last annotation update)
BENZOYL-COA LICASE (FRAGMENT).
Methanospirillum hungatei.
Archaea; Euryarchaeota; Methanomicrobiales; Methanospirillum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9UWM1;
Q9UWM1;
01-MAY-2000
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Parathyroid hormone induction of rat 1 osteosarcoma cells is mediated through Mol. Endocrinol. 10:867-878(1996). EMBL; U53605; AAB47407.1; -. NON_TER 12
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MEDLINE=95093530; PubMed=8000479;
Hardinan G., Byrnes L., Peden J., Wolff J., Gan
"Cloning and sequencing of the Atlantic salmon
cytochrome c oxidase subunit III gene (coxIII)
expression during parr-smolt transformation.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE. Auburger G., Winter J.;
Appl. Microbiol. Biotechnol.
SEQUENCE 15 AA; 1880 MW;
                                                                                                                 SEQUENCE FROM N.A.
TISSUE-LIVER;
                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebractinopterygii; Neopterygii; Teleostek; Euteleos
Protacanthopterygii; Salmoniformes; Salmonidae; NCBI_TaxID=8030;
                                                                                                                                                                                                                                                                                            Salmo salar (Atlantic salmon)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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Rajakumar R.A., Quinn C.O.
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2 KLYPE 6
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MHSAILATFFFF
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3; Conservative
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                                                                                                                                                                                                                                                                                                                                          (FRAGMENT).
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01, Last sequence update)
08, Last annotation update)
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2; Mismatches
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Pred. No. 2.7e
4; Mismatches
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D2972EF3E690AC5C CRC64;
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h an AP-1-binding site.";
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3.5e+03;
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2.7e+03;
                                                                                                                                                                                                                           Vertebrata;
Euteleostei;
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                       Gannon F.;
mon (Salmo salar)
II) and analysis
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RESULT
Q9RLP2
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D7 D7 Q1
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Q9UMJ9;
01-MAY-2000
01-MAY-2000
01-MAY-2000
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NON_TER 1
SEQUENCE 15
                                                                                   Q9RLP2 PRELIMINARY; PRT; 20 AA.
09RLP2;
01-MAY-2000 (TIEMBLrel. 13, Created)
01-MAY-2000 (TIEMBLrel. 13, Last sequence update)
01-MAY-2000 (TIEMBLrel. 13, Last annotation update)
PUTATIVE CYSTEINBYL T-RNA SYNTHETASE (FRAGMENT).
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Homo sapiens (Human).
Homo sapiens (Human).
Horota; Metazoa; Chordata;
Horota; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAY-2000 (TremBLrel 13, 0
01-MAY-2000 (TremBLrel 13, 1
01-MAY-2000 (TremBLrel 13, 1
GALACTOSE-1-PHOSPHATE URIDYL
Neisseria gonorrhoeae.
Bacteria; Proteobacteria;
NCBI_TaxID=485;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Elsas L.J., Langley S., Steele E., Evinger J., Fridovich-Keil J.L., Brown A., Singh R., Fernhoff P., Hjelm L.N., Dembure P.P.; "Galactosemia: a strategy to identify new biochemical phenotypes an molecular genotypes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mol. Mar. Biol. Biotechnol. 3:210-216(1994).
EMBL; L04502; AAA62410.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
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Eur. J. Pediatr. Suppl. 2
EMBL: L46718; AAB59602.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. MEDLINE=95193790;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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Pediatr. 8:110-113(1993)
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Pred. No. 3.
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3.7e+03;
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Best Local S
Matches 5
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Best Local Similarity
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Q9UK71;
Q1-MAY-2000 (TrEMBLrel. 13, Created)
Q1-MAY-2000 (TrEMBLrel. 13, Last sequence update)
Q1-OCT-2000 (TrEMBLrel. 15, Last annotation update)
LITHIUM-SENSITIVE MYO-INOSITOL MONOPHOSPHATASE A1 (EC
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*Use of a non-selective tansformation technique to construct a multiple restriction-modification deficient mutant of Neisseria gonorrhoeae. *,

gonorrhoeae. *,

submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.

EMBL; U42459; AAD56589.1; -.

NON_TER 20

20

SEQUENCE 20 AA; 2245 MW; 4C893C704879FFD3 CRC64;
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SEQUENCE FROM
STRAIN-WR302;
                                                                                                                                    029341 PRELIMINARY; PRT;
029341;
01-NOV-1996 (TrEMBLrel 01, Created)
01-NOV-1996 (TrEMBLrel 01, Last seq
01-MAY-2000 (TrEMBLrel 13, Last ann
NGF-INDUCIBLE PROTEIN TIS21 (FRAGMEN
                                                                Sus scrofa (Pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae;
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Parthasarathy R.;

Parthasarathy L., Parthasarathy R.;

"Molecular cloning, genomic organization and promoter analysis human brain lithium-sensitive myo-inositol monophosphatase Al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human brain isoenzyme.";
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  SEQUENCE FROM N.A.
                                            NCBI_TaxID=9823;
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57.1%;
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Last annotation update)
(FRAGMENT).
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Pred. No. 4.7e+03
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                                                                     Euteleostomi;
Sus.
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Best Local S
Matches 4
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MEDLINE-94259890; PubMed-8201051;

MEDLINE-94259890; PubMed-8201051;

Shida K., Takamizawa K., Nagaoka M.,

"Enterotoxin-binding glycoproteins in
heated bowine milk.";

J. Dairy Sci. 77:930-939(1994).

HSSP; P00711; 1HFZ.

SEQUENCE 20 AA; 2321 MW; C738FD1.
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EMBL; F14751; CAA23227.1; -.

NON_TER 1

NON_TER 20 20

SEQUENCE 20 AA; 2058 MW; I
SEQUENCE FROM N.A.

Veltri C., Pilla F., Lagonigr.

"A new allele of goat alpha s
submitted (DEC-1999) to the E:
EMBL; AJ242728; CAB44433.2; -
NON_TER 1
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21
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01-NOV-1999 (TrEMBLrel. 12,
01-MAY-2000 (TrEMBLrel. 13,
01-MAY-2000 (TrEMBLrel. 13,
ALPHA S2-CASEIN (FRAGMENT).
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O9TRCO;
O1-MAY-2000 (TrEMBLrel. 13, Created)
O1-MAY-2000 (TrEMBLrel. 13, Last sequence update)
O1-OCT-2000 (TrEMBLrel. 15, Last annotation update)
ENTEROTOXIN-BINDING GLYCOPROTEIN PP16K (FRAGMENT).
Bos taurus (Bovine).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Eutel
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora;
Bovidae; Bovinae; Bos.
                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea Bovidae; Caprinae; Capra.

Bovidae; Caprine; Capra.
                                                                                                                                                                                                                                                                                   Capra hircus (Goat).
                                                                                                                                                                                                                                                                                                            CSN1S2
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                                                                  s2-casein.";
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Pred. No. 4.7e
1; Mismatches
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No. 4.7e+03
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No. 4.7e+03;
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proteose-peptone fraction
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SEQUENCE

21

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2591 MW; A608995532CA3098 CRC64;

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Best Local Similarity
Matches 5; Conserv
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Best Local Similarity 33.3
Matches 4; Conservative
                                SEQUENCE FROM N.A.
STRAIN-ATCC 10987;
MEDLINE-99231848; PubMed-10217496;
Okstad O.A., Hegna I., Lindbaeck T., Ris
"Genome organization is not conserved be
Bacillus subtilis.";
Microbiology 145:621-631(1999).
EMBL; AJ010135; CAB40592.1;
                                                                                                                                                                                                      Q9XBK2;
01-NOV-1999
01-NOV-1999
01-NOV-1999
TRANSLATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9ZEQ5
Q9ZEQ5;
Q1-MAY-1999
Q1-MAY-1999
Q1-MAY-1999
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NON_TER
SEQUENCE
                                                                                                                                          Bacillus cereus.
Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Bacillus.
NCBI_TaxID-1396;
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           Elongation factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases. EMBL; AJ012727; CAA10150.1; -. NON_TER 1 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wedege E., Caugant D.A., Musacchio A., Saunders N.B., Zollinger W.D., "Specificities of reference monoclonal antibodies and human postvaccination sera with meningococcal Pl.19,15 outer membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
STRAIN-19/92;
                                                                                                                                                                                                                                                                  Q9XBK2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Neisseria meningitidis.
Bacteria; Proteobacteria; beta subdivision; Neisseriaceae; Neisseria.
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24 AA; 2743 MW;
24 AA;
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(TremBLrel. 12, Last sequence update)
(TremBLrel. 12, Last annotation update)
ELONGATION FACTOR TS (EF-TS) (FRAGMENT).
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24
2671 MW;
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Pred. No. 5.6e+03;
1; Mismatches 3
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Pred. No. 4.9e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                    260BA0002923D9F6 CRC64;
F1AB99BFEB5DDABD CRC64;
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                                                                     Rishovd A.L., Kolsto A.B.;
d between Bacillus cereus a
                                                                                                                                                                                                                                                                 24 AA.
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Query Match 21.6%; Score 22; DB 2; Length 24;
Best Local Similarity 44.4%; Pred. No. 5.6e+03;
Matches 4; Conservative 3; Mismatches 2; Indels 0; Gaps
Qy 12 KMFPEVKEK 20
:| |::||
Db 6 QMVKELREK 14
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Search completed: February 5, 2001, 10:55:22 Job time: 911 sec

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB seq length: 0 Maximum DB seq length: 25
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Sequence:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
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110:
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116:
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1: /SIDS1/gcgdata/geneseq/geneseqp/AA1980.DAT:*

2: /SIDS1/gcgdata/geneseq/geneseqp/AA1981.DAT:*

3: /SIDS1/gcgdata/geneseq/geneseqp/AA1982.DAT:*

4: /SIDS1/gcgdata/geneseq/geneseqp/AA1983.DAT:*

5: /SIDS1/gcgdata/geneseq/geneseqp/AA1984.DAT:*

6: /SIDS1/gcgdata/geneseq/geneseqp/AA1985.DAT:*

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7: /SIDS1/gcgdata/geneseq/geneseqp/AA1987.DAT:*

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Gapop 10.0 , Gapext 0.5
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102
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                     //SIDS1/gcgdata/geneseq/geneseqp/AA1988.DAT:*

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/SIDS1/gcgdata/geneseq/geneseqp/AA2000.DAT:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result	Score	Query Match	Leng	. ₩	Ū	Description
<u>ب</u> ب ر	102	100.0	20	18	W18843	65 kD Glutam
ŭΝ	102 98	96.1		16	W01794 R72277	Human 65 kD glutam Glutamic acid deca
4	. 98	96.1	20	21	Y59541	GAD65 fragment
رب ر	98	96.1		21	Y59577	GAD65 fragment
σ	78	76.5		18	W10300	Mammalian GAD 65
7	74	72.5	14	16	R76653	Peptide derived
8	74	72.5	14	18	W18861	65 kD Glutamic
9	74	72.5	23	13	R29627	GAD peptide.
10	66	64.7	13	18	W35531	Glutamic acid
11	53	52.0	24	ü	R29626	GAD peptide.
12	37	36.3	9	20	Y30061	Peptide analogue o
				•		·*

45	. #		43	42	41	40	39	38	37	36	35	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13
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W40980	9	2000	W40978	W40975	W93458	P90569	W60689	W12233	R99509	R82084	Y46838	R96939	Y07348	P60768	Y30477	R96941	R96940	R96938	P82903	W40976	W63841	W63838	R06363	R96007	R43871	Y57065	Y59578	Y59576	R72278	R72276	W10301	R27147	х99016
	percue	1	peptide		ic peptic	Peptide to increas	Za P	Influenza PR8 A vi	T-cell epitope use	Infuenza hemagglut		Loop swap II mutei	Matrix metalloprot	Sequence of peptid	Mutant sequence of	co mut	Loop swap III mute	Loop swap I mutein	Activated metallop	Cryptic peptide of	Plasmid pRMP100 M.	Plasmid pRMP100 M.	C-terminal of fish	Nuclear localisati	OmpA2-R-7 signal p	규	•		3	dec	n GAD	Proinsulin express	HLA class II bindi

## ALIGNMENTS

W18843 standard; peptide; 20 AA.

W18843;

05-JAN-1998 (first entry)

65 kD Glutamic acid decarboxylase peptide fragment II.

GAD; 65 kD; human; glutamic acid decarboxylase; autoreactive; diagnosis; insulin-dependent diabetes mellitus; IDDM; cell-mediated disease; predisposition; autoimmune; tumour; rheumatoid arthritis; multiple sclerosis.

Synthetic.

DE19526561-A1.

23-JAN-1997.

20-JUL-1995; 95DE-1026561.

20-JUL-1995; 95DE-1026561.

(BOEF ) BOEHRINGER MANNHEIM GMBH.

Donie F, En Pozzilli P, Endl J, Ganz M, P, Stahl P; Jung G, Kientsch-engel

WPI; 1997-088254/09.

Skin test for diagnosis of cell-mediated diseases, esp. diabetes involving intradermal admin. of auto:reactive substances  $% \left( 1\right) =\left\{ 1\right\} =$ 

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Best Local
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                                                    The present peptide is a framgent of the human 65 kD glutamine decarboxylase (GAD); which can be used to diagnose, or diagnose a prediaposition to, a tumour or immunological disease, preferably an autoimmune disease, especially diabetes. It can also be used as a reagent to determine specific T cell subpopulations, in medicaments to treat or prevent immunological diseases, prefereably autoimmune disease, especially diabetes, to produce antigens, especially immunogens or tolerogens and to isolate specific T cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      W18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for diagnosis of insulin-dependent diabetes mellitus (IDDM). The diagnosis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         by administering an autoreactive substance intradermally and establishing the diagnosts on the basis of the occurrence or lack of a positive reaction at the site of administration. The method is used for diagnosis of autoimmune and tumour diseases, preferably T-cell-mediated diseases such as rheumatoid arthritis, multiple sclerosis and especially IDDM.
                                                                                                                                                                                                                                                                                                                                                                                                                  Glutamine
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      reinjection,
                                 subpopulations,
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                                                                                                                                                                                                                                                                                                                                                                                             diabetes,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prevention; production;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tumour; immunological;
determination; T cell;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; glutamine decarboxylase; GAD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human 65 kD
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                                                                                                                                                                                                                                                                                                                         Page 12; 15pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                  decarboxylase peptide(s)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Van Endert P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Boitard C,
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   ns, which can be used to produce optionally after inactivation.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ne decarboxylase; GAD; diagnosis; predisposition;
logical; disease; autoimmune; diabetes; reagent;
T cell; subpopulation; medicament; treatment;
oduction; antigen; immunogen; tolerogen; isolation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95DE-1025784
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Pred. No. 4e-12;
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                                                                                                             Query Match
Best Local Similarity
Matches 19; Conserv
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Best Local Similarity
Matches 20; Conser
                                                                                                                                                                                Q86481 and Q86482 encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 were derived. These fragments can be used to detect autoantibodies against GAD, e.g. to diagnose and treat GAD-related autoimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glutamic acid decarboxylase; GAD65; auotimmune disorders; insulin-dependant diabetes mellitus; stiff man disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                    Y59541 standard; peptide;
                                                                                                                                                                                                                                                                         New polypeptide fragments of glutamic acid decarboxylase - for diagnosis and treatment of auto:immune disease, esp. insulin dependent diabetes, also related nucleic acid, vectors, antibodies, hybridoma(s) etc.
                                                                                                                                                                                                                                                                                                                                                Clare-Salzler MJ,
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                                                                                                                                                                                                                                                        Claim 1;
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                                                                                NMYAMMIARFKMFPEVKEK 20
                                                                       nmyammiarfkmfpevkek 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard;
                                                                                                                                                                                                                                                       Page 76; 100pp; English.
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                                                                                                                        Score 98;
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Pred. No.
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                                                                                                                         DB 16;
2.1e-1
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Best Local S
Matches 19
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21-SEP-1990;
18-JUN-1991;
                                                                                                                                                                                                                                                                                                                                               This sequence represents a fragment of the glutamic acid decarboxylase 65 (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are available from natural sources.
                                         GAD65; glutamic acid decarboxylase 65; autoimmune disorder; insulin dependent diabetes mellitus; Stiff man disease; diac
                                                                                GAD65
                                                                                                        03-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Column 33; 61pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ameliorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stiff man
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAD65; glutamic acid decarboxylase 65; autoimmune disorder; insulin dependent diabetes mellitus; Stiff man disease; diac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAD65 fragment, peptide #17
          Homo sapiens
                                                                                                                                                    Y59577 standard; peptide;
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                                                                              fragment,
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                                                                                                                                                                                                                                                               Similarity
19; Conserv
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                                                                                                                                                                                                                                                               Conservative
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90US-0586536.
91US-0716909.
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                                                                               peptide #17
                                                                                                                                                                                                                                                                         96.1%;
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Pred. No.
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                                          diagnosis;
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Best Local S
Matches 19
27-OCT-1995;
07-JUN-1995;
07-JUN-1995;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This sequence represents a fragment of the glutamic acid decarboxylase 65 (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are available from natural sources.
                                                                                                                                                                                                                                                                                                                                     Soluble; fusion; major histocompatibility complex; MHC; heterodimer; complex; GAD 65; antiqen; binding groove; tole; autoantigen; disasse; insulin dependent; diabetes mellitus; antagonist; T cell; anergy; presenting cell.
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21-SEP-1990;
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disease -
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                                                                                                                                 07-JUN-1996;
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                                                                                                                                                                                                                                                                                  Mammalian spp
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kaufman DL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      65 peptide.
95US-0005964.
95US-0480002.
95US-0482133.
95US-0483241.
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90US-0586536
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                                                                                                                                 96WO-US10102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          peptide;
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100.0%; Pr
'" 0;
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. 2.1e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 20;
                                                                                                                                                                                                                                                                                                                                                                tolerance; itus; IDDM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        heterodiner:peptide complex, comprises DNA encoding 1st and 2nd MHC domains, linked by DNA encoding a 5-25 residue linker, and a DNA encoding an antigenic peptide able to associate with a peptide binding groove of the MHC molecule, e.g. the present peptide, linked in frame to the DNA encoding the 2nd domain by a DNA encoding a 5-25 residue linker. The complex can be used to induce immunological tolerance in adults susceptible to, or suffering from an autoantigen related disease, e.g. insulin dependent diabetes mellitus (IDDM), by antagonising the binding of particular T cells and antigen presenting cells, to induce anergy (immunological non-responsiveness) in the targeted T cell. As the heterodimers and corresponding antigen are permanently linked into a single chain, obviating the complex eliminates inefficient and non-specific
                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
          Albert W, Stahl P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel fused major histocompatibility complex:antigenic peptide complex - useful to induce tolerance to an autoantigen-related disease e.g. insulin-dependent diabetes mellitus
                                                                                         04-FEB-1994;
                                                                                                                                                                                                           diagnosis; autoimmune
                                           (ENDL/)
                                                                                                                 24-MAY-1994;
                                                                                                                                        27-JUL-1995.
                                                                                                                                                              DE4418091-A1
                                                                                                                                                                                                                     diabetes; T-cell subpopulation;
                                                                                                                                                                                                                                             Peptide derived
                                                                                                                                                                                                                                                                    05-MAR-1996
                                                                                                                                                                                                                                                                                         R76653;
                                                                                                                                                                                                                                                                                                               R76653 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1997-052337/05
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ANER-)
                                                                               20-JAN-1994;
                                                                                                                                                                                     Homo
                                                                                                                                                                                                                                                                                                                                                                                                                               Local
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                                                                                                                                                                                                                                                                                                                                                                      snmyammiarfkmfp
                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                    l Similarity
15; Conserv
                                            ENDL J.
BOEHRINGER MANNHEIM GMBH
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ZYMOGENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        soluble fused major histocompatibility complex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                loading.
          Schendel
          Dornmair K,
chendel D;
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                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                  (first
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                                                                               94DE-4403522
94DE-4401629
                                                                                                                 94DE-4418091.
                                                                                                                                                                                                                                           from human glutamic acid decarboxylase 12.
                                                                                                                                                                                                                                                                                                               peptide;
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                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                               76.5%;
100.0%;
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                      Endl
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                                                                                                                                                                                                                                                                                                                                                                                                                   Score 78; DB; Pred. No. 9.1
                     'n
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                                                                                                                                                                                                                     detection;
                     Jung
                     Ġ,
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9.1e-08;
hes 0;
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                      Meinl
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                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 20;
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W18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for diagnosis of insulin-dependent diabetes mellitus (IDDM). The diagnosis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected by administering an autoreactive substance intradermally and establishing the diagnosis on the basis of the occurrence or lack of a positive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R76642-62 are derived from human glutamic acid decarboxylase and specifically react with T-cell sub-populations isolated from recently diagnosed Type-I diabetics. Pharmaceutical compsns. conty. these peptides and those shown in R77571-72, are useful for the diagnosis of a disease or predispositions of immune system disease, tumours, and autoimmune diseases, including diabetes. The peptides are able to detect specific T-cell subpopulations that are then used for antigen prodn.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Antigen-specific activated T-lymphocytes and their detection interaction with inventive peptide(s) of peptide-MHC complexe useful in diagnosis of e.g. diabetes and auto: immune diseases
                                                                                                              Claim 11;
                                                                                                                                                       Skin test
                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                        multiple
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65 kD Glutamic acid decarboxylase peptide fragment 12.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W18861;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W18861 standard; peptide; 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
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                                                                                                                                                                                                                                                                                                           20-JUL-1995;
                                                                                                                                                                                                                                                                                                                                                                  DE19526561-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                   predisposition; autoimmune; tumour; rheumatoid arthritis;
                                                                                                                                         involving
                                                                                                                                                                                                                                                    (BOEF ) BOEHRINGER MANNHEIM GMBH.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                insulin-dependent
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                                                                                                           F1g
                                                                                                                                         intradermal admin.
                                                                                                                                                       for diagnosis of cell-mediated diseases, esp. diabetes
                                                                                                                                                                                                                         End1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   human; glutamic acid decarboxylase; autoreactive; diagnosis; andent diabetes mellitus; IDDM; cell-mediated disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                            dl J,
Stahl
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                                                                                                            2; 12pp;
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P;
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Pred. No.
                                                                                                                                         auto:reactive
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3.3e-07;
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RESULT
R29627
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 Query Match
Best Local S
Matches 15
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Best Local :
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                                                                                      The peptide corresponds to a glutamic acid decarboxylase (GAD 65) sequence and may be used for the detection of autoantibodies to GAD 65. They can also be used for screening drugs such as those that alter GAD function and for generation of antibodies which can be used to detect GAD 65. Such methods can be used in the diagnosis and therapy of autoimmune diseases such as insulin dependent diabetes mellitus and "stiff man" syndrome. The polypeptide can be used to bind or block the continuance of an autoimmune response to GAD 65. It may also be coupled to therapeutic agents and used immunotherapeutically. See also R29625-9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                reaction at the site of administration. The method is used for diagnosis of autoimmune and tumour diseases, preferably T-cell-mediated diseases such as rheumatoid arthritis, multiple sclerosis and especially IDDM.
                                                                                                                                                                                                                                                           Glutamic acid decarboxylase isolated polypeptide(s) - useful for diagnosis and treatment of auto-immune diseases, e.g. insulin dependent diabetes meilitus, drug screening and antibody prodn.
                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Glutamic acid decarboxylase; auto immune disease; insulin dependent; diabetes mellitus; drug screening; antibody; stiff man syndrome.
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                                                                                                                                                                                                                                   Claim 6; Page 20; 35pp; English.
                                                                                                                                                                                                                                                                                                                  WPI; 1992-425701/52.
                                                                                                                                                                                                                                                                                                                                            Clare-Salzier MJ, Erlander MG,
                                                                                                                                                                                                                                                                                                                                                                      (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                18-JUN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                          17-JUN-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-DEC-1992
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-MAY-1993
Local Similarity hes 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
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  Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /label- Thr, Glu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    72.5%;
             72.5%;
93.8%;
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Pred. No. 3.3e-07;
             Score 74; DB 13;
Pred. No. 5.6e-07;
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 Mismatches
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                                                                                                                                                                                                                                                                                                                                            Tobin AJ
                          Length 23;
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Indels
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Gaps
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8 IARFKMFPEVKEK 20

Query Match Best Local Matches

l Similarity 13; Conserv

Conservative

64.7%; Score 66; DB 100.0%; Pred. No. 8.9 Live 0; Mismatches

DB 18; 1 8.5e-06; 0

Length 13,

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RESULT 10
W35531
XX W35531
XX W35531
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XX T-cell
XX Scaffo
XX Uniden
PN W09738
XX Uniden
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                                                            CC through a linker to a solid phase, forming a complex of (A)-solid phase.

CC through a linker to a solid phase, forming a complex of (A)-solid phase.

CC Where (A) comprises 10-50 amino acids capable of forming a secondary

CC structure in a benigh buffer after liberation from the solid phase, and

CC further the (A)-solid phase complex complex from the solid phase, and

CC and/or an immune mediator coupled on (A). The present sequence

CC represents a peptide used in an example from the present invention. An

CC (A)-solid phase complex can be used as a scaffold for the production of

CC chemical derivatives, characterised by covalently attaching molecules at

CC the incorporation into an Immunostimulating Complex (Iscom) resulting an

CC (A)-Iscom complex which is used for the production of a substances in an aqueous solution by conjugation. (A) derivatised with

CC one or more peptides having fibronectin-, laminin- or vitronectin-like

CC binding activities can be used for the promotion of cell-attachment to

CC plastic surfaces, in particular to inhibit numour growth and metastasis

CC and for promotion of specifically-binding aptamers or as a diagnostic

CC agent. Such diagnostic-(A) molecules could be used to detect molecules

CC derived from or indicative of pregnancy or of a disease, such as an

CC infectious, autoimmune or cancerous disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-APR-1996; , 96DK-0000398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T-cell stimulatory peptide; immunogen; non-dendritic; carrier; scaffold; inhibition; metastasis; wound healing; solid phase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Glutamic acid decarboxylase
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Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 27; Page 150; 262pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Non-dendritic peptide carrier linked to a solid phase - usefu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1997-512645/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               03-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-OCT-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-APR-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W35531;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Heegaard PMH, Jakobsen PH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (PEPR-) PEPRESEARCH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9738011-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ű
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amm1arfkmfpevkxk
       13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97WO-DE00146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide GAD65 253-265
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RESULT
Y30061
SXAXEXEX
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                                                                                                                                                                      δÃ
                                                                                                                                                                                                Matches
                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                  The peptide corresponds to a glutamic acid decarboxylase (GAD 65) sequence and may be used for the detection of autoantibodies to GAD 65. They can also be used for screening drugs such as those that alter GAD function and for generation of antibodies which can be used to detect GAD 65. Such methods can be used in the diagnosis and therapy of autoimmune diseases such as insulin dependent diabetes mellitus and "stiff man" syndrome. The polypeptide can be used to bind or block the continuance of an autoimmune response to GAD 65. It may also be coupled to therapeutic agents and used immunotherapeutically. See also R29625-9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Glutamic acid decarboxylase isolated polypeptide(s) - useful for diagnosis and treatment of auto-immune diseases, e.g. insulin dependent diabetes mellitus, drug screening and antibody prodn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Glutamic acid decarboxylase; auto immune disease; insulin dependent; diabetes mellitus; drug screening; antibody; stiff man syndrome.
         Peptide analogue of glutamic acid decarboxylase (GAD).
                                  08-OCT-1999
                                                                                 Y30061 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 5; Page 20; 35pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1992-425701/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clare-Salzier MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-JUN-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAD peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-MAY-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R29626
                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-JUN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-DEC-1992.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EP519469-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Misc-difference
                                                                                                                                                                                                            Local Similarity
                                                                                                                                                ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11
                                                                                                                                                                       5 AMMIARFKMFPEVKEK 20
                                                                                                                                             simaarykyfpevkxk 16
                                                                                                                                                                                                10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard;
                                                                                                                                                                                                                                                              24 AA;
                                                                                                                                                                                                Conservative
                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91US-0716909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92EP-0110308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /label- Thr, Glu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peptide;
                                                                                 peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Erlander MG,
                                                                                                                                                                                                            52.0%;
                                                                                   9 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24
                                                                                                                                                                                                Ψ
                                                                                                                                                                                                           Score 53; DB 13; Pred. No. 0.0038;
                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kaufman DL,
                                                                                                                                                                                                ψ
                                                                                                                                                                                                                        Length 24;
                                                                                                                                                                                                Indels
                                                                                                                                                                                                0;
                                                                                                                                                                                                Gaps
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RESULT Y99016 ID Y9

13

Y99016 standard; Peptide; 15 AA.

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N

fpevkek 8

14 FPEVKEK 20

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The present sequence represents a peptide analogue of glutamic acid decarboxylase (GAD), an autoantigen. The sequence is used in the CC conjugates of the invention. The specification describes a conjugate, compusing an autoantigen, an immune-reactive peptide fragment of an CC compigates induce regulatory memory T cells and enhance the secretion of inhibitory cytokines and suppress the secretion of inflammatory CC cytokines. The conjugates also stimulate in vitro proliferation of CC mammalian T lymphocytes. The conjugates can be used for ameliorating CC autoimmune disease, e.g. multiple sclerosis, juvenile diabetes or CC rheumatoid arthritis. They can be used for treating e.g. colitis, cystemic lupus erythematosus, dermatomycsitis, Sydenham's chorea, CC systemic lupus erythema nodosum, Takayssu's arteritis, myasthenia gravis, CC erythematosus, erythema nodosum, Takayssu's arteritis, systemic lupus CC IgA nephropathy, polyarteritis nodosa, ankylosing spondylitis, CC goopasture's syndrome, thromboangilitis obliterans, Sjogren's syndrome, CC chronic active hepatitis, thyrotoxicosis, scleroderma, myocarditis, CC pemphigus vulgaris, idiopathic thrombocytopenia, Wegener's consultance of consultances, giant cell arteritis, omyotrophic lateral sclerosis, capidly procressive olomernilonopathy, pernicious anemia, consider alvenilis, giant cell arteritis, or fibrosing alvenilis.
Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-OCT-1998;
27-JAN-1998;
25-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Proteolipoprotein; PLP; autoantigen; regulatory memory T cell;
inhibitory cytokine secretion; inflammatory cytokine secretion;
autoimmune disease; multiple sclerosis; juvenile diabetes;
                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New conjugates of autoantigens, fragments or analogs with fatty acids, used for treating autoimmune disease, e.g. juvenile diab
multiple sclerosis and rheumatoid arthritis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1999-478981/40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 15; Page 42; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-JUL-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W09937315-A1
                                                                                                                             rapidly progressive glomerulonoephritis, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BAIJ/) BAI J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Modified-site
 Local Similarity
nes 7; Conserv
                                                                                             9 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          arthritis.
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0104663.
98US-0072702.
98US-0090677.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US01884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "acylated with two n-caprionic acids, two
n-caprylic acids or with two n-lauric acids"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                    36.3%;
100.0%;
   0,
                      Score 37;
Pred. No.
     Mismatches
                   DB 20; 1
2.1e+05;
                                                                                                                             fibrosing alveolitis.
                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               diabetes,
     0;
     Gaps
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                                                                                                                                                                                          The present invention relates to a new pharmaceutical composition comprising a unit dose form of a peptide, or analogue, comprising an cepitope selected from those represented by peptides ry8812-ry9339 which care derived from various antigens for various human leucocyte antigen comparising an epitope selected from various antigens for various human leucocyte antigen comparison or equal to 1,000 nM. The pharmaceutical can be used to induce a chelper T cell response. The pharmaceutical focuses the immune response comparison or equal diseases and could therefore be used in cases of choards selected determinants and could therefore be used in cases of chancic viral diseases and cancer. Examples of diseases that can be contained at the peptide containing pharmaceutical include autoimmune consists), allograft rejection, allergies, lyme diseases, hepatitis, comparistly in the peptide peptide epitopes can be used to enhance immune conservatives. The peptide epitopes can be used to enhance immune carcinoma, lymphoma, and condyloma acuminatum. The peptides may also be used to make monoclonal antibodies useful as potential diagnostic or therapeutic agents. The peptides may also be useful as diagnostic or therapeutic agents. The peptides may also be useful as diagnostic or therapeutic agents. The peptides may also be useful as diagnostic or therapeutic agents. The peptides may also be useful as diagnostic or therapeutic agents. The peptides may also be useful as diagnostic or therapeutic agents which are substantial risk of developing chronic infection. The selection of appropriate T and B cell epitopes should allow the development of epitope based vaccines particularly towards conserved cepitopes of pathogens which are characterized by high sequence
                                                                     Query Match

Best Local Similarity

Matches 6; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; Page 43; 60pp; English.
                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New compositions containing immunogenic peptide epitopes for various HLA class II DR molecules useful for inducing helper T cell response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rheumatoid arthritis; multiple sclerosis; myasthenia gravis; AIDS; allograft rejection; allergy; lyme disease; hepatitis; prostate cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sette A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9961916-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           glomerulonephritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human leucocyte antigen; HLA class II; immune response; chronic viral disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HLA class II binding antigen epitope peptide #205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (EPIM-) EPIMMUNE INC.
                                  10 RFKMFPEVKE 19
 \vdash
rfemfrelne 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000-097143/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Southwood S,
                                                                                                                                                                  15 AA;
                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-0087192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-US12066.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         food hypersensitivity; malaria
                                                                                         31.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sidney J;
                                                                     2;
                                                                                       Score 32;
Pred. No.
                                                                       Mismatches
                                                                                 DB
. 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antigen epitope; pharmaceutical;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cancer; autoimmune disease;
                                                                                                        21;
                                                                   ب
                                                                                                      Length 15;
                                                                     Indels
                                                                   0,
                                                                   Gaps
                                                          . 0
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RESULT
W10301
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R27147
ID R27147
XX R27147
XX R27147
XX Proins
XX Proi
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               XYX
                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The sequence comprises a short leader signal sequence (Leu)6 selected to enhance the expression of and/or stabilise the proinsulin when expressed in a host cell. This method can be used for the prodn. of other foreign gene products such as insulin, somatostatin or an interferon. See also R27146.
                                                                            11-SEP-1997
                                                                                                                                                                                 W10301 standard; peptide; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Enhanced expression and/or stabilisation of foreign gene prods. - using short selected leader signal sequences in host microorganisms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB; Q28661.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (CANA-) CANADA NAT RES COUNCIL. (WURJ/) WU R J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-JAN-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CA1306208-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Enhanced expression; foreign gene stabilisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Proinsulin expression stabilising leader sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R27147 standard; Protein; 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example; Page 6; 17pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1992-308288/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Narang SA, Sung WL, Wu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-JAN-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          region
                                                                                                                                                                                                                                       15
                                                                                                                                                                                                                                                                                                                     1 SNMYAMMIARFKMF 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85CA-0471799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85CA-0471799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "selected leader sequence
18..19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note- "beta-Gal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "proinsulin start"
                                                                                                                                                                                                                                                                                                                                                                                                                                                          31.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           짇
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 32;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 19
                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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Mammalian GAD 65 peptide

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RESULT
R72276
                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                      heterodimer:peptide complex, comprises DNA encoding 1st and 2nd MHC domains, linked by DNA encoding a 5-25 residue linker, and a CDNA encoding an antigenic peptide able to associate with a peptide binding groove of the MHC molecule, e.g. the present peptide, linked in frame to the DNA encoding the 2nd domain by a DNA encoding a 5-25 residue linker. The complex can be used to induce immunological tolerance in adults susceptible to, or suffering from an autoantigen related disease, e.g. insulin dependent diabetes mellitus (IDDM), by antagonising the binding of particular T cells and antigen presenting cells, to induce anergy (immunological non-responsiveness) in the targeted T cell. As the heterodimers and corresponding antigen are permanently linked into a single chain, obviating the complex eliminates inefficient and non-specific
                                                                                                                                                                                                                                                                          Query Match
Best Local S
                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-JUN-1995;
07-JUN-1995;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel fused major histocompatibility complex:antigenic peptide complex - useful to induce tolerance to an autoantigen-related disease e.g. insulin-dependent diabetes mellitus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Soluble; fusion; major histocompatibility complex; MHC; heterodimer; complex; GAD 65; antigen; binding groove; tolerance; autoantigen; disease; insulin dependent; diabetes mellitus; IDDM; antagonist; T cell; anergy; presenting cell.
           Glutamic acid decarboxylase; GAD65; auotimmune insulin-dependant diabetes mellitus; stiff man
                                                  Glutamic acid decarboxylase (GAD65) fragment.
                                                                                                             R72276;
                                                                                13-NOV-1995
                                                                                                                                     R72276 standard; Peptide;
                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A novel soluble fused major histocompatibility complex (MHC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 10; Page 109; 142pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Deshpande
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95US-0480002.
95US-0482133.
95US-0483241.
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Best Local :
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New polypeptide fragments of glutamic acid decarboxylase - diagnosis and treatment of auto:immune disease, esp. insuli
                              WPI; 1995-131360/17.
                                                                                                              24-AUG-1994;
                                                                                                                                  23-MAR-1995
                                                                                                                                                       W09507992-A
                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                        Glutamic acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antibodies, hybridoma(s) etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        diagnosis and treatment of auto:immune disease, esp. insulin dependent diabetes, also related nucleic acid, vectors,
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                                                                     (REGC ) UNIV CALIFORNIA.
                                                                                         17-SEP-1993;
                                                                                                                                                                                               insulin-dependant
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15 snmyam 20
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100.0%;
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                                                                                                                                                                                              GAD65; auotimmune ellitus; stiff man
                                                                                                                                                                                                                             (GAD65) fragment.
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Pred. No.
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disease.
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Y59576
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21-SEP-1990;
18-JUN-1991;
This sequence represents a fragment of the glutamic acid decarboxylase 6 (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q86481 and Q86482 encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 were derived. These fragments can be used to detect autoantibodies against GAD, e.g. to diagnose and treat GAD-related autoimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
                                                                                                                                                                                                                                                                                                   disorders such as insulin disease -
                                                                                                                                                                                                                                                                                                                   Ameliorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stiff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAD65; glutamic acid decarboxylase 65; autoimmune disorder; insulin dependent diabetes mellitus; Stiff man disease; dia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                dependent diabetes, also related nucleic acid, vectors, antibodies, hybridoma(s) etc.
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                                                                                                                                                                                                                                                                                                                                                                                                                                     Tobin
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90US-0586536.
91US-0716909.
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                   This sequence represents a fragment of the glutamic acid decarboxylase 65 (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are available from natural sources.
                                                                                                                                                                                                      Ameliorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stif
                                                                                                                                                                                                                                                                                                                                07-JUN-1995;
21-SEP-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAD65; glutamic acid decarboxylase 65; autoimmune disorder; IDDM; insulin dependent diabetes mellitus; Stiff man disease; diagnosis
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                                                                                                                                                                     Example 11; Column 42; 61pp; English.
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90US-0586536.
91US-0716909.
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100.0%; Pr
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                                                                                                                                                                                                                                                                              immunotherapeutic agent is used to treat autoimmune diseases such as insulin dependent diabetes mellitus, multiple sclerosis, autoimmune thyroiditis, uveoretinitis, rheumatoid arthritis or abnormal inflammatory immune responses. The NTTA induces regulatory tolerance by elicitation of regulatory T cells among T cells recognizing the NTTA but not participating in the immune response. The NTTA are capable of recognition by substantial populations of uncommitted T cells which can be primed, or biased, towards regulatory responses to provide effective treatment. The NTTA are effective in regulating undesirable immune responses even when target determinants used as agents promoting tolerance agents have failed to induce an effective regulatory T cell response. NTTAs as agents promoting tolerance are anticipated to be safer than use of target
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Amino acid sequences Y57063-Y57091 are examples of neglected target tissue antigens NTTAs. NTTAs are antigens (whole antigens or fragments) not involved in autoimmunity. These peptides and proteins are used in the method of the invention which involves administering an NTTA as an antigen based immunotherapeutic agent, to a host afflicted with an autoimmune response associated with an autoimmune disease. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Neglected target tissue antigen; NTTA; autoimmunity; autoimmune response; immunotherapeutic agent; insulin dependent diabetes mellitus; multiple sclerosis; autoimmune thyroiditis; rheumatoid arthritis;
                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                    determinants.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Administration of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-052905/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kaufman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-MAY-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  uveoretinitis;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Y57065 standard; peptide; 20 AA
                                                                                                                 15 PEVKEK 20
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                                                                                pevkek 6
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                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tian J, Olcott
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inflammatory response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-0084636
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    neglected target tissue antigens to modulate immune
                                                                                                                     30.4%; bred. No. ...
100.0%; Pred. No. ...
1ve 0; Mismatches
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R43871 standard;

Protein; 14 AA.

W09617956-A2

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Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                  A fragment of DNA approximately 200-500 base pairs in length is ligated into a recombinant vector (ompA1-R-6; ompA2-R-7 or ompA3-R-3) and used to transform E.ooli. These cells then express a polypeptide which is immunoreactive with HTLV-III-specific antibody. The HTLV-III polypeptides can be used for the production of antibodies, in immunoassays for the detection of HTLV-III-specific antibodies and in vaccines for the prevention of AIDS. The antibodies can also be used to detect HTLV-III polypeptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cloning and expression of new HTLV-III DNA - used to obtain polypeptide(s) and antibodies for diagnosis, prevention and treatment of HTLV-III infection, partic. AIDS
                                                               Target binding assembly; nucleic acid recognition unit; NF kappa-B; SP1; TATA; human papillomavirus; HPV; HPV E2; human immunodeficiency virus; HIV LTR; Tat binding unit; probe; assembly sequence; asymmetry sequence; nuclear localisation signal sequence; human cell; HPV LTR; HIV; bacteria
                                                                                                                                                          19-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chang NT, Gallo RC,
                        Synthetic.
                                                              nuclear localisation signal sequence; human
                                                                                                                               Nuclear localisation signal.
                                                                                                                                                                                                          R96007 standard; peptide; 15
                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Figure 6a; 3lpp; English.
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N-PSDB; Q45924.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-OCT-1984;
23-JAN-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-JUL-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human T-cell lymphotropic virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Polypeptide; antibodies; HTLV; AIDS; vaccine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (CENZ ) CENTOCOR INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-OCT-1985;
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                                                                                                                                                                                                                                                                                                     ARFKMFPEVKE 19
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                                                                                                                                                         (first entry)
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85US-0693866.
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                                                                                                                                                                                                                                                                                                                                           29.4%;
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                                                                                                                                                                                                                                                                                                                                           Score 30;
Pred. No.
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                                                                                                                                                                                                                                                                                                                                           31;
                                                                                                                                                                                                                                                                                                                                                       14;
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RESULT
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Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence, and an OSA. The assembly sequence and asymmetry sequences are responsible for the folding and association of the NARS. The NARS are selected from NF kappa-B, SP1, TATA, human papillomavirus (HPV) EZ, HPV LTR, human immunodefictency virus (HTV) LTR and Tat binding units. The linker sequence is an oligopeptide, which does not interfere with NAR from the rest of the TBA. The OSA is an attached support or indicator, or other means of localisation of the probe. The probe can be used in a method for detecting or localisation of the probe. The probe can be used in sequence (TNA). The method is highly sensitive, and has a high degree of specificity. The method can be used for detecting specific nucleic acid sequences, including those found in human cells, in HIV, HPV, and other nucleic acid containing a sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This sequence represents a nuclear locallisation sequence of a target binding assembly (TBA) of the invention. The TBA is recognised by the target binding region (TBR) of a probe of the invention. The probe of the invention contains a TBR, a booster binding region (BBR), and an optional support or attachment (OSA). The TBA contains at least one nucleic acid recognition unit (NAR), and optionally a linker sequence, assembly sequence, an asymmetry sequence, a nuclear localisation signal
                                                                                                                                                 Osteichthyes;
                                                                                                                                                                                 C-terminal of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13-JUN-1996
                                                                                                                   Pleuronectiformes paralichthys.
                                                                                                                                                                                                               13-DEC-1990
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Probe nucleic acids, target binding assemblies, etc - for detective and localisation of specific nucleic acid sequences, esp. HIV and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Weininger
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26-SEP-1988;
                            20-OCT-1988;
                                                                                                                                                                                                                                                                         R06363 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid containing systems, including bacteria and viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GENE-) GENE POOL INC.
                                                                                                                                                                                                                                                                                                       23
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15
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                                                                                                                                                                                                               (first entry)
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                                                                                                                                                  flatfish
                                                                                                                                                                             fish growth hormone
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88JP-0240265
                            88JP-0264928
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Pred. No.
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W63838
ID W63
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XX W6
XX W6
XX W7
XX Pel
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The protein is extracted from the pituitory gland of P. parallchthys. It can be used to accelerate the growth of the species of Pleuronectiformes and Salmo oncorrhynchus. The protein has a mol. wt. of 22,000 and an isoelectric pt. of 7.1. See also R06362, R07480 and R07481.
This sequence is a M.hpyl protein fragment found in plasmid pRMP100. The plasmid also contains fragments of proteins CysE and IceA derived from Helicobacter pylori strain 60190. This plasmid is used in method which provides an IceA protein or fragments of the protein capable of being used in standard immunoassays to detect H. pylori-specific antibodies, particularly for diagnosis, especially antibodies characteristic of IceA-positive strains which are ulcerogenic. Detecting presence of
                                                                                                                                                                                                                                                                                    New Helicobacter pylori proteins - induced by contact with epithelium and related DNA, are associated with ulcer formation useful in diagnosis and immunisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fish growth hormone - extracted from pituitary gland Pleuronectiformes Paralichthys fish.
                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1998-286350/25
N-PSDB; V43963.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ICeA; immunoassay; detection; ulcerogenic; gastric carcinoma;
peptic ulcer; immunisation; vaccine; protection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Blaser MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthet1c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plasmid pRMP100 M.Hpyl protein fragment from H. pylori strain 60190.
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                                                                                                                                                                                                                                 Disclosure; Fig 2; 107pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (UYVA-) UNIV VANDERBILT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Miller GG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 30;
Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Thompson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          51;
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Search completed: February Job time: 624 sec

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RESULT
W63841
Query Match
Best Local Similarity
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                                                           This sequence is a M.hpyl protein fragment found in plasmid pRMP100. This plasmid also contains fragments of proteins CysE and IceA derived from Helicobacter pylori strain J178. This plasmid is used in method which provides an IceA protein or fragments of the protein capable of being used in standard immunoassays to detect H. pylori-specific antibodies, particularly for diagnosis, especially antibodies characteristic of IceA-positive strains which are ulcerogenic. Detecting presence of IceA-positive strains also allows the risk of developing mastric
         carcinoma to be assessed. Ligands, particularly antibodies, that recognise IceA proteins are used to treat peptic ulcers, while immunisation with IceA-negative H. pylori is used to protect against
                                                                                                                                                                                                                                                                New Helicobacter pylori proteins - induced epithelium and related DNA, are associated waseful in diagnosis and immunisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W63841;
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                                                                                                                                                                                                                              Disclosure; Fig 2; 107pp; English.
                                                                                                                                                                                                                                                                                                                                                                                             Blaser MJ, Miller GG,
                                                                                                                                                                                                                                                                                                                                                                                                                               (UYVA-) UNIV VANDERBILT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-MAY-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9743901-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Helicobacter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptic ulcer; immunisation; vaccine; protection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IceA; immunoassay; detection; ulcerogenic; gastric carcinoma; treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plasmid pRMP100 M.Hpyl protein fragment from H. pylori strain J178.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-OCT-1998
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6 skyklipfike 16
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DB; V44037.
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                                                                                                                                                                                                                                                                                                                                                                                             Peek RM,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                           Thompson
                                                                                                                                                                                                                                                   d by contact with with ulcer formation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19;
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(and its consequences such as ulcers,

gastritis and gastric

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                                                         Query Match
Best Local S
Matches 4
                                                                                                                                                       cancer). Immunogenic IceA fragments, or the nucleic acid encoding them, can also be used for vaccination. Antibodies (Ab) raised against IceA cabe used therapeutically or to screen other strains for homologous proteins. Expression of IceA is strongly correlated with ulceration, so detecting IceA allows differentiation between ulcerogenic and non-ulcerogenic strains.
                                                                                                                                 Sequence
                                                       Local Similarity
les 4; Conserv
:::|: | :||
6 skyklipfike 16
                              9 ARFKMFPEVKE 19
                                                                                                                                 25 AA;
                                                          Conservative
                                                                        29.4%;
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Pred. No.
                                                            Mismatches
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Result
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Perfect score:
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Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                             Score
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length:
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113
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W18844
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                                                                                                                                                                                                                                                                                                                     SUMMARIES
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Compugen Ltd
                                                                                              GAD65 fragment, pe
Glutamic acid deca
GAD65 fragment, pe
Beta (1 -> 4)-N-ac
                Mugwort pollen all
Mugwort pollen all
Chemokine peptide,
Beta-2 integrin pe
                                                                                                                                                                                                                                                         Description
                                                                                                                                                                           65 kD Glutamic aci
Human 65 kD glutam
Glutamic acid deca
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	Peptide containing	Human cytokeratin	nodef	H. pylori Urease A	Helicobacter pylor	icobacter Fa	art	片	cobacter p	HIV principal neut	n	Glucagon precursor	Acetylcholinestera	2	Breast-specific BS	int heat-	рģ	.gen	actoferrin	100	ivalent	G,	ivalent	ivalent	ivalent	ivalent	lent	e-pz	ď.	Peptide #2 of huma			Interferon-gamma i

## ALIGNMENTS

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W18844
GAD; 65 kD; human; glutamic acid decarboxylase; autoreactive; diagnosis; insulin-dependent diabetes mellitus; IDDM; cell-mediated disease;
                                    WPI; 1997-088254/09.
                                                       Donie F, Endl J, Ganz M, Jung G, Pozzilli P, Stahl P;
                                                                                                       20-JUL-1995;
                                                                                                                           20-ЈОТ-1995;
                                                                                                                                                                  DE19526561-A1
                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                        predisposition; autoimmune; tumour; rheumatoid arthritis; multiple sclerosis.
                                                                                                                                                                                                                                                       65 kD Glutamic acid decarboxylase peptide fragment III
                                                                                                                                                                                                                                                                            05-JAN-1998 (first entry)
                                                                                                                                                                                                                                                                                               W18844;
                                                                                                                                                                                                                                                                                                                 W18844 standard; peptide; 20
                                                                                    (BOEF ) BOEHRINGER MANNHEIM GMBH.
                                                                                                                                               23-JAN-1997
                                                                                                        95DE-1026561.
                                                                                                                           95DE-1026561
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                                                                 Kientsch-engel
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Skin test for diagnosis of cell-mediated diseases, esp. diabetes involving intradermal admin. of auto:reactive substances

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RESULT NO. 1795 NO. 1
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Best Local :
                                                                                                                     The present peptide is a framgent of the human 65 kD glutamine decarboxylase (GAD), which can be used to diagnose, or diagnose a predisposition to, a tumour or immunological disease, preferably an autoimmune disease, especially diabetes. It can also be used as a reagent to determine specific T cell subpopulations, in medicaments to treat or prevent immunological diseases, prefereably autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      W18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for diagnosis of insulin-dependent diabetes mellitus (IDDM). The diagnosis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected by administering an autoreactive substance intradermally and establishing the diagnosis on the basis of the occurrence or lack of a positive reaction at the site of administration. The method is used for diagnosis of autoimmune and tumour diseases, preferably T-cell-mediated diseases such as rheumatoid arthritis, multiple sclerosis and especially IDDM.
                        diseases, especially diabetes, to produce antigens, especially immunogens or tolerogens and to isolate specific T cell subpopulations, which can be used to produce antigens or for
                                                                                                                                                                                                                                                                                                                                                               Claim 1; Page 12; 15pp; German
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Glutamine decarboxylase peptide(s) - for diagnosis and therapy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1997-078452/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stahl P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-JUL-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DE19525784-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      determination;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; glutamine decarboxylase; GAD; diagnosis; predisposition; tumour; immunological; disease; autoimmune; diabetes; reagent;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human 65 kD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     reinjection; inactivation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prevention; production; antigen; immunogen; tolerogen; isolation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Boitard C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T cell; subpopulation; medicament; treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95DE-1025784.
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   after inactivation.
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Pred. No. 6.9e-12;
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RESULT
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                                                                                                            Query Match
Best Local Similarity
Matches 16; Conser
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Best Local
                                                                                                                                                                                  Q86481 and Q86482 encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 were derived. These fragments can be used to detect autoantibodies against GAD, e.g. to diagnose and treat GAD-related autoimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
                                                                                                                                                                                                                                                                           New polypeptide fragments of glutamic acid decarboxylase - diagnosis and treatment of auto:immune disease, esp. insuli dependent diabetes, also related nucleic acid, vectors, antibodies, hybridoma(s) etc.
                                                                                                                                                                                                                                                                                                                                                   Clare-Salzler MJ, Erlander MG,
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                   Y59571 standard;
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                                                                                                                                                                                                                                                                                                                                                                                            17-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Glutamic acid decarboxylase; GAD65; auotimmune disorders;
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                                                                                                                                                                                                                                                         Page 76; 100pp; English.
                                                                                                             Conservative
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                   peptide;
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1.8e-07;
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Best Local
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21-SEP-1990;
18-JUN-1991;
                                                                                                                                                                                                                                                                                                                                                                         This sequence represents a fragment of the glutamic acid decarboxylase 65 (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are
                                             Glutamic acid decarboxylase; GAD65; auotimmune disorders; insulin-dependant diabetes mellitus; stiff man disease.
                                                                                   Glutamic acid decarboxylase (GAD65) fragment.
                                                                                                             13-NOV-1995
W09507992-A
                       Homo sapiens
                                                                                                                                      R72271;
                                                                                                                                                              R72271 standard;
                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 11; Column 42; 61pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ameliorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stiff man
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-095930/08
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insulin dependent diabetes mellitus; Stiff man disease; diagnosis;
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90US-0586536.
91US-0716909.
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                                                                                                                                                              Peptide;
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0; Mismatches
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1.8e-07;
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Best Local :
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21-SEP-1990;
18-JUN-1991;
                                                                                                                                                                                                                                                                                                                             Y59551;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                can be used to detect autoantibodies against GAD, e.g. to diagnose and treat GAD-related autoimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q86481 and Q86482 encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 were derived. These fragments
Ameliorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stiff man
                                                                                                                                                                                                                                             GAD65; glutamic acid decarboxylase 65; autoimmune disorder; IDDM;
insulin dependent diabetes mellitus; Stiff man disease; diagnosis
                                                                                                                                                                                                                                                                               GAD65 fragment, peptide #11.
                                                                                                                                                                                                                                                                                                     03-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                  Y59551 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Page 76; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New polypeptide fragments of glutamic acid decarboxylase - for diagnosis and treatment of auto:immune disease, esp. insulin dependent diabetes, also related nucleic acid, vectors, and antibodies, hybridoma(s) etc.
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                                                     Tobin AJ, Kaufman DL,
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90US-0586536.
91US-0716909.
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100.0%;
                                                       Erlander MG
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Pred. No.
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Best Local Similarity
Matches 9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering GAD65 peptide to the patient. The method can be used for ameliorating GAD65 peptide to the autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are
Sequences shown in W63543 to W63556 represent fragments of beta (1 -> 4)-N-acety1glucosaminy1-transferase (GnT-IV) enzyme. The invention provides bovine and human GnT-IV enzymes that can be used for converting sugar chain subunits having one structure to another structure. Vectors containing the DNA sequences encoding these enzymes can be used to transform host cells for the production of the GnT-IV enzymes. The enzymes are useful in the production of branched oligosaccharides and
                                                                                                                      Claim
                                                                                                                                                             Recombinant beta(1-4)N-acetyl:glucosaminyl:transferase - allows production of difficultly accessible branched poly:saccharides
                                                                                                                                                                                                                                                                                                                                                                                                                             Bos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Beta (1 -> 4)-N-acetylglucosaminyl-transferase; GnT-IV; bovine; human; enzyme; sugar chain subunit; branched oligosaccharide; polysaccharide; drug; reagent; food; biopolymer; glycoprotein; erythropoietin.
                                                                                                                                                                                                          WPI; 1998-348516/30
                                                                                                                                                                                                                                       Minowa M,
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12-DEC-1996;
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                                                                                                                   Page 49; 112pp; Japanese
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                                                                                                                                                                                                                                      Oguri S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4)-N-acetylglucosaminyl-transferase (GnT-IV)
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96JP-0332411.
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Pred. No.
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Query Match Best Local

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                     W31018-W31040 are B cell epitopes of mugwort pollen co-factor-independent phosphoglycerate mutase (PGM-i) isoform Art6. PGM-i is a highly conserved plant allergen (panallergen) which can cause cross-reactivity in patients allergic to pollen and plant-derived foods. PGM-i and it's B cell and T cell epitopes can be used for the in vitro detection of allergy against PGM-i, by measuring serum IgE or a cellular reaction. They can also be used in immunotherapy and will not cause an autoimmune response because PGM-i is significantly different from the human enzyme, which is co-factor dependent.
                                                                                                                                                                       New recombinant DNA encoding plant phospho:glycerate antigenic epitope(s) - useful for diagnosis or treatmallergies to pollen and plant-derived foods
                                                                                                                                                                                                                                                                                                                                                                                                                                              Cofactor-independent phosphoglycerate mutase; PGM-i; E.C. Timothy grass; pollen; allergy; plant allergen; panallerger cell; epitope; immunotherapy; detection; diagnosis; hay
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polysaccharides which are difficult of access by other methods. 'also useful in the production of drugs, reagents and foods and in modifying the properties of bippolymers containing sugar chains. enzyme may also be used for the preparation of glycoproteins such
 Sequence
                                                                                                                                                                                                                                                             Breitenbach
                                                                                                                                                                                                                                                                                                           02-AUG-1995;
                                                                                                                                                                                                                                                                                                                                   02-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                            13-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                     WO9705258-A2
                                                                                                                                                                                                                                                                                                                                                                                                            Artemisia vulgaris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mugwort
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W31018;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    erythropoietin.
                                                                                                                                                                                                                                                                                    (BIOM-) BIOMAY PRODN & HANDELS
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                                                                                                                                                                                                                         1997-145695/13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pollen
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6; Conser
                                                                                                                                                                                                                                                Richter
  21 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15
                                                                                                                                                   Fig 11a;
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A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              allergen B cell epitope.
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                                                                                                                                                                                                                                                                                                                                     96WO-AT00141
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peptide;
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                                                                                                                                                 160pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31.0%;
                                                                                                                                                                                                                                                C, Engel E,
Rheinberger l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21
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Pred. No.
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                                                                                                                                                                                                                                                                                     GMBH
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                                                                                                                                                                                                                                                             Ferreira
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19;
                                                                                                                                                                                                                                                                                                                                                                                                                                               rgen; panallergen;
diagnosis; hay fev
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                                                                                                                                                                                     treatment of
                                                                                                                                                                                                                                                              Jilek
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                                                                      RESULT 10
Y14278
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                                                                                                                                                                                  Query Match
Best Local S
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                                                                                                                                                                                                                                                                                           W31051-W31072 are B cell epitopes of mugwort pollen co-factor-independent phosphoglycerate mutase (PGM-1) isoform Art17. PGM-1 is a highly conserved plant allergen (panallergen) which can cause cross-reactivity in patients allergic to pollen and plant-derived foods. PGM-1 and it's B cell and T cell epitopes can be used for the invito detection of allergy against PGM-1, by measuring serum IgE
                                                                                                                                                                                                                                                       or a cellular reaction. They can also be used in immunotherapy and will not cause an autoimmune response because PGM-1 is significantly different from the human enzyme, which is co-factor dependent.
                                                                                                                                                                                                                                                                                                                                                                                                        New recombinant DNA encoding plant phospho:glycerate mutase or antigenic epitope(s) - useful for diagnosis or treatment of allergies to pollen and plant-derived foods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cofactor-independent phosphoglycerate mutase; PGM-1; E.C. 5.4.21; Timothy grass; pollen; allergy; plant allergen; panallergen; B cell; T cell; epitope; immunotherapy; detection; diagnosis; hay fever;
          29-JUL-1999
                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Fig 11b;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Breitenbach M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T cell; epitope; conserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mugwort pollen allergen
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                                   Y14278;
                                                          Y14278 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1997-145695/13.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Artemisia vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BIOM-) BIOMAY PRODN & HANDELS GMBH
                                                                                                                     10 wkladhpk 17
                                                                                                                                              2 WELADOPO 9
                                                                                                                                                                      Similarity
5; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Richter K,
                                                                                                                                                                                                                                  23
                                                                                                                                                                    Conservative
       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95AT-0001320
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            er K, Rheinberger H;
                                                         peptide;
                                                                                                                                                                                 30.1%;
                                                                                                                                                                                                                                                                                                                                                                                   160pp; German.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cell
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                                                                                                                                                                                  Score 34;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      epitope.
                                                                                                                                                                      Mismatches
                                                                                                                                                                                DB
45;
                                                                                                                                                                                               18;
                                                                                                                                                                      1;
                                                                                                                                                                                             Length 23;
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RESULT R20273

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3 ELADQPQNLEEILMHC 18

Query Match
Best Local Similarity
Matches 8; Conserv

Conservative

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29.2%;

Score 33; Pred. No. ced. No. 46;
Mismatches

20;

Length 17; Indels

2

Gaps

1.

Sequence

17

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R20273;

R20273 standard; peptide;

23 AA

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enhancing an inflammatory response, an immune response or haematopoletic cell-associated activity at a tumour site. They can also be used for preventing or inhibiting an indication associated with haematopoletic cell recruitment or histamine release from basophils or mast cells. They can also be used to modulate the chemokine-induced activity of can also be used to modulate the chemokine-induced activity of can contain the containing attention associated site, to treat a containing attention attention and containing attention or replication (e.g. HIV), low bone mineral density, a containing attention or replication (e.g. HIV), low bone mineral density, a containing attention and containing attention or treat provided in a mammal, to enhance wound healing, to prevent or treat asthma, organ transplant rejection, rheumatoid arthritis or callergy. They can also be used to inhibit a product or intermediate in the arachidonic acid pathway and where leukotriene, thromboxane and/or cancel after a with elevated and to prevent or inhibit an indication
                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence represents a fragment of the chemokine SDF1. The invention relates to chemokine peptides and mimetics, particularly derived from monocyte chemoattractant protein-1 (MCP-1). The chemokine peptides and variants and derivatives can inhibit or reduce or increase, or enhance chemokine-induced activity. They can be used for increasing or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chemokine; immune response; monocyte chemoattractant protein-1; MCP-1; chemokine induced activity; inflammatory response; vascular indication; haematopoietic cell-associated activity; tumour; coronary artery disease; myocardial infarction; unstable angina pectoris; atherosclerosis; asthma; vasculitis; lentiviral infection; low bone mineral density; suppressor; parasitic infection; autoimmune disease; psoriasis; wound healing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chemokine peptide, CRD Cys0Cys16peptide2(1-15)[SDF1].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Fig 14; 208pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New chemokine peptides and mimetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1999-347124/29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Grainger DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-SEP-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-MAR-1999
                                          associated with elevated TNF-alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (NEOR-) NEORX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transplant rejection; rheumatoid arthritis; allergy; therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kanaly
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tatalick LM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               English
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10-APR-1992

(first entry)

Beta-2 integrin peptide derived from CD11b alpha subunit.

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RESULT 12
W02061
ID W02061
XX
AC W02061
XY
DT 09-APR
XX
DE Human
XX
KW Beta2
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                                                                                                                                                                                                                                                                                                                          The peptide (SEQ ID NO: 20) corresponds to residues 112-134 of CD11b alpha subunit of beta 2 integrin. The sequence occurs immediately prior to the A domain which is conserved in the CD11c and CD11a subunits and also in the collagen/heparin/platelet Gp1 binding regions of the mature von Willebrand factor. The peptide gene, the sequence of which was disclosed by Arnaout et al., J. Cell Biol. 106:2153 (1988). (References are also provided for the DNA sequences of human CD18. CD11c and CD11a). The peptide is capuseful for treatment of ischaemia reperfusion injury, burns, useful for treatment of ischaemia reperfusion injury, burns, frostbite, acute arthritis, asthma and adult respiratory distress syndrome. It may also be used to block intra-islet infiltration of macrophages associated with insulin-dependent diabetes mellitus, and for controlling phagocyte-mediated tissue damage to heart muscle during acute cardiac insufficiency.
                                                                                                                                                                                                                              Query Match
Best Local Similarity 40...
7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Beta-2 integrin peptide CD11b, recombinant hetero-dimer CD11b/CD18 - or MAb against them; useful for inhibiting CD11/CD18 mediated immune response in control of phagocyte-mediated tissue
Beta2 integrin; A-domain; metal binding domain; inflammatory response;
                            Human beta2 integrin subunit CD11b, residues 112-134.
                                                         09-APR-1997
                                                                                                                W02061 standard;
                                                                                                                                                                                                                                                                                                                         Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-JAN-1991;
18-JUN-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Immune response; phagocyte-mediated tissue damage; A domain; MAM; inflammation; CD11/CD18 complex; alpha subunit; CR3; Mo1; Mav-1; complement receptor type 3; heterodimer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 8; Page 73;
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                                                                                                                                                                                                                    4 LADQPONLEEILMHC 18
                                                                                                                                                                                                                                                                                                                          23
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                                                         (first entry)
                                                                                                                                                                                                                                                                                                                         AA,
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90US-0539842.
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                                                                                                                   peptide;
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                                                                                                                                                                                                                                                                 29.2%;
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                                                                                                                   23
                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                               Score 33; DB
Pred. No. 66;
                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                13;
                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                             Length 23;
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RESULT
R9951
ID R99
XX R99
XX R99
XX IPT
DT 29-
XX INT
XX INT
XX INT
XX ANT
XX CAN
XX 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 40...
7; Conservative
                                                                                                                                                                                                                                                                       Interferon-gamma inducer protein; IFN-gamma; antiviral; virucide;
antitumour; antibacterial; immunoregulator; adoptive immunotherapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         In vitro identification of integrin function antagonists - 
measuring binding of A-domain peptide derived from integrin
ligand in presence and absence of candidate antagonist
                                                                                                                    EP712931-A2
                                                                                                                                                                               Mus sp.
                                                                                                                                                                                                                                                                                                                                                               Interferon-gamma inducer protein tryptic peptide (aa79-103).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R99561;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R99561 standard; Peptide; 25 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 lrqqpqkfpealrgc 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 LADOPONLEEILMHC 18
                                                                                                                                                                                                                                              cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       95US-0380167
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 66;
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10-NOV-1995;

95EP-0308055.

22-MAY-1996

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Best Local S
Matches 5
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10-MAR-1995;
18-SEP-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fukuđa S,
Taniguchi
                                                                                                                                                                                                   Interferon gamma; inducer; IFNgamma; immunocompetent cell; antiviral; antitumour; antiseptic; immunoregulatory; platelet-increasing agent; therapy; prevention; condyloma accuminatum; renal cancer; brain cancer; granuloma; mycosis fungoides; rheumatism; allergy; cytotoxicity; AIDS; killer T-cell; interleukin-2; IL-2; tumour necrosis factor; TNF;
         Tanimoto T, Torigoe K;
                                          (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
                                                                10-FEB-1995;
14-JUL-1994;
                                                                                                  13-JUL-1995;
                                                                                                                                                EP692536-A2
                                                                                                                                                                     Synthetic
                                                                                                                                                                                            adoptive
                                                                                                                                                                                                                                                                                                 30-AUG-1996
                                                                                                                                                                                                                                                                                                                                           R92504 standard; peptide; 25 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tryptic peptides (R99561 and R99562) correspond to amino acids 79-103 and 26-43, respectively, of a novel interferon-gamma (IFN-gamma) inducer protein identified in mouse liver. The peptides were used to design PCR primers (T32405-06) that were utilised in the amplification of mouse liver cDNA, leading to the isolation of a clone (T32403) coding for mouse IFN-gamma inducer protein (R99559).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example A-3-6; Page 37; 48pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1996-252837/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-SEP-1995;
15-NOV-1994;
                                                                                                                        17-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          to treat and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
les 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                     3 sfeemdppeniddi 16
                                                                                                                                                                                                                                                                                                                                                                                                                           1 NWELADQPQNLEEI 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ,
M
                                                                                                                                                                                           immunotherapy; monoclonal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kohno K,
                                                                                                                                                                                                                                                                        gamma production inducer peptide #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         interferon-gamma prodn.-inducing polypeptide -
prevent, e.g. viral disease, malignancies and i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tanimoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95JP-0058240.
95JP-0078357.
95JP-0262062.
                                                               95JP-0045057.
94JP-0184162.
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94JP-0304203.
                                                                                                 95EP-0304906
                                                                                                                                                                                                                                                                                                                                                                                                                                                           29.2%;
35.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kunikata T,
                   Kurimoto M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Torigoe
                                                                                                                                                                                                                                                                                                                                                                                                                                                   6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 33;
Pred. No.
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                                                                                                                                                                                           antibody.
                   Okamura
                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB
. 72;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                  Taniguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and immune
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Best Local Similarity
Matches 5; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (see R92506), which induces interferon gamma (IFNgamma) production in immunocompetent cells. The protein is useful as an antiviral, antitumour, antiseptic, immunoregulatory and platelet-increasing agent. It can be used for treating or preventing AIDS, condyloma acuminatum, renal or brain cancer, granuloma, mycosis fungoides, rheumatism and allergy. The protein can also be used to induce IFNgamma production in cultured cells. The IFNgamma inducer strongly induces cytotoxicity of killer T-cells and when used with interleukin-2 (II-2) and tumour necrosis factor (INF), may improve the effect (or reduce side effects) cadoptive immunotherapy in tumours. The DNA encoding this protein (see adoptive immunotherapy in tumours the protein, which can then be purified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein that induces gamma interferon prodn. in immuno:competent
cells - used e.g. as antiviral or antitumour agent, also induces
cytotoxicity of killer cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1996-070177/08
              Disclosure;
                                                                                                                                                                                                            20-SEP-1996;
26-SEP-1995;
                                                                                                                                                                                                                                                                                                                    EP767178-A1.
                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                               Interferon-gamma, IFN-gamma; antiviral; antioncotic; radiotherapy; immunoregulatory; antitumour agent; chemotherapy; leukopaenia; thrombocytopaenia; immunocompetent cell; asthma; hayfever; rheumatism; interleukin; killer cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W15702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W15702 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R92504 and R92505 represent fragments of the protein of the invention (see R92506), which induces interferon gamma (IFNgamma) production in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 21; 30pp; English.
                                        tumours and as antimicrobial agent etc
                                                                        Human protein that induces interferon-gamma prodn.
                                                                                                        WPI; 1997-205381/19.
                                                                                                                                                                (HAYB)
                                                                                                                                                                                                                                                          26-SEP-1996;
                                                                                                                                                                                                                                                                                        09-APR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Internal fragment of interferon-gamma inducer protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (or assayed) using monoclonal antibodies.
                                                           .mmuno:competent cells -
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                                                                                                                                                             HAYASHIBARA SEIBUTSU KAGAKU
                                                                                                                                 Fujii M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25 AA;
            Page 21; 26pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                              96JP-0269105.
95JP-0270725.
96JP-0067434.
                                                                                                                                                                                                                                                          96EP-0306997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peptide;
                                                                                                                                    Kurimoto M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29.2%;
35.7%;
                                                          useful for adoptive immuno: therapy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 33; DB
Pred. No. 72;
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                                                                                                                                    Nukada
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17;
                                                                                                                                    Tanimoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 25;
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Best Local S
Matches 5
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10-MAR-1995;
29-SEP-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          production in immunocompetent cells. This protein enhances cytotoxicity of killer cells and induces their formation. It is used as an antioncotic agent for antitumour immunotherapy, an antiviral (including antioncotic agent for antitumour immunotherapy, an antiviral correction or antibacterial agent, and in the treatment of atopic or immune system diseases, e.g. asthma, hayfever or rheumatism. When formulated with interleukin 3, it is also used to treat leukopaenia and thombocytopaenia associated with radiotherapy or chemotherapy of leukaemia and other cancers. When used in antitumour immunotherapy, this novel protein significantly improves the immunotherapeutic effect of interleukin 2 (IL-2), compared with use of IL-2 alone, either when administered to the patient (before administration of the patient) and the state of the patient of the patient (before administration of the patient).
                                                              This protein may be used prevention and treatment
                                                                                               The sequences given in W24259-61 are peptide fragments of a protein which induces interferon-gamma production in immunocompetent cells.
                                                                                                                                                 Disclosure; Page 10; 12pp; Japanese.
Sequence
                               bacterial infections and i
to residues 80-104 of the
                                                                                                                                                                                                     useful
                                                                                                                                                                                                                 A drug
                                                                                                                                                                                                                                                   WPI; 1997-369391/34
                                                                                                                                                                                                                                                                                                                                                                                                                   17-JUN-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Interferon-gamma; immunocompetent cell; malignant tumour;
viral disease; bacterial infection; immune disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W24260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present sequence represents an internal fragment of a protein from human cells, which induces interferon-gamma (
                                                                                                                                                                                                                                                                               (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
                                                                                                                                                                                                                                                                                                                                                                                   24-JAN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  JP09157180-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptide #2 of human protein for induction of interferon-gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-OCT-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W24260 standard; Peptide; 25 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                  immune diseases
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les 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                patient) are being grown.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NWELADQPQNLEEI 14
                                                                                                                                                                                                containing a:polypeptide which induces interferon-gamma - for treating e.g. malignant tumours, viral, bacterial or
25 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                              interferon-gamma production in immunocompetent cells may be used as the major component in a drug for the treatment of e.g. malignant tumours, viral diseases.
                                                                                                                                                                                                                                                                                                                95JP-0279906.
95JP-0078357.
95JP-0274988.
                                                                                                                                                                                                                                                                                                                                                                                  96JP-0028722.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29.2%;
35.7%;
                                              immune diseases.
                               human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 33; DB
Pred. No. 72;
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
                               protein.
                                              This peptide corresponds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
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                                     The present sequence represents a fragment derived from a murine collist IFN-gamma is a protein which has antiviral, antioncotic and immunoregulatory activities, and is produced by immunocompetent cells immunoregulatory activities, and is produced by immunocompetent cells stimulated with antigens or mitogens. The present peptide was used to design probes which were used to isolate the corresponding human protein from human liver cells. The protein of the invention is used to treat IFN-gamma susceptible diseases, and also have use as a antiviral agent. Cantibacterial agent, antitumour agent, Immunoregulatory agent and blood platelet enhancing agent, Diseases which can be treated with the condyloma, and AIDS; bacterial diseases such as hepatitis, herpes syndrome, condyloma, and AIDS; bacterial diseases such as Candidiasis and malaria; solid malignant tumours such as renal cancer, mycosis fungoides, and cadult receil leukaemia, chronic myelogenous leukaemia, and malignant collegases such as alleray and resuments.
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Best Local Similarity
Matches 5; Conserv
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23-FEB-1995;
10-MAR-1995;
18-SEP-1995;
29-SEP-1995;
                                                                                                                                                                                                                                                                                                                      Novel polypeptides used in susceptible diseases -
                                                                                                                                                                                                                                                                                                                                                                                                  Ushio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antiviral; immunoregulatory; antigen; mitogen; ritorial; antitumour; IFN-gamma susceptible disease; antibacterial; antitumour; blood platelet enhancing agent; hepatitis; herpes syndrom AIDS; bacterial disease; Candidiasis; malaria; solid mali
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Y53906 standard; Peptide;
                                                                                                                                                                                                                                                                                           Example A2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-NOV-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-DEC-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      chronic myelogenous leukaemia; malignant leukaemia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  renal cancer; mycosis fungoides; chronic granulomatous disease; blood cell malignant tumour; adult T cell leukaemia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fragment derived from a protein that induces IFN-gamma production.
                                                                                                                                                                                                                                                                                                                                                                                                                              (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-NOV-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17
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                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          interferon gamma production; IFN-gamma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rheumatism
                                                                                                                                                                                                                                                                                                                                                                                                Torigoe K,
                                 and
                                                                                                                                                                                                                                                                                          Page 14; 42pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                               immune diseases such as allergy and rheumatism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            95EP-0308055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95JP-0262062
95JP-0274988
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95JP-0078357
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35.7%;
                                                                                                                                                                                                                                                                                                                                                                                                  Tanimoto
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                                                                                                                                                                                                                                                                                          English.
                                                                                                                                                                                                                                                                                                                                       the treatment of interferon-gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 33;
Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                   Okamura
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72;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pes syndrome; condyloma; solid malignant tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          immunocompetent cell;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 25;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         immune disease;
                                                                                                                                                                                                                                               by immunocompetent
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Best Local S
Matches 5
                                                                            in the treatment of arthritis, asthma, and other inflammatory diseases, vascular restenosis, atherosclerosis, tumour growth and progression, fibroproliferative disorders, and central nervous system (CNS) and neurodegenerative diseases. The products can also be used for detection and diagnosis. The purified heparanase, both recombinantly produced human heparanase and heparanases isolated from human platelet activity, allows for the convenient selection of compounds having anti-heparanase activity, i.e. inhibitors of heparanase activity, can be measured by blocking heparanase-mediated release of radioactive fragments from in
                                                                                                                                                                                                                                                                                                                                                                        blocking angiogenesis or inflammation. It can be used for treating e.g. psoriasis, diabetic retinopathy or solid tumours, or for the degradation of heparin and the neutralisation of heparin's anticoagulant properties during surgery. Inhibitors of heparanase activity can be used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence represents a fragment of the human pre-proheparanase of the invention. The pre-proheparanase sequence was isolated from human platelets. The heparanase can be used for identifying agents which alter heparanase activity. The heparanase can be used for wound healing or for the property of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New isolated platelet heparanase polypeptides, used to develop products for, e.g. wound healing and blocking angiogenesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W09943830-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; pre-proheparanase;
inflammation; psoriasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human pre-proheparanase protein sequence fragment #6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-NOV-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-MAR-1998;
24-FEB-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tumour growth;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 inflammation; psoriasis; diabetic retinopathy; solid tumour; arthritis; heparin degradation; anticoagulant neutralisation; asthma; CNS disease; inflammatory disease; vascular restenosis; atherosclerosis; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18
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                                                      radiolabelled
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fig
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0079401.
98US-0075706.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Heinrikson RL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US01489
                                                   (HSPG)/heparin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             359
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          platelet; wound healing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
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Pred. No.
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72;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
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Query Match Best Local Similarity

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Best Local
                                                                                                                                                                                     angiogenic homology region (AHR) of thrombospondin (TSP) 4, angiostatin, endostatin or TSP-1. Multivalent ligands based on the peptides and related angiogenic peptides may be anti-angiogenic, e.g. for treating tumours, cardiovascular disease (arteriosclerosis, ischaemia), obesity, osteoarthritis, duodenal ulcers, abmormal ocular vascularisation in diabetes, or they are proangiogenic, e.g. for promotion of wound healing and to stimulate neovascularisation around occluded blood vessels (a potential alternative to by-pass surgery or angioplasty). The multivalent ligands may be used in human or veterinary medicine. They
                              may also be used raise peptide-specific antibodies (used for detecting the peptides) and to identify and isolate compounds that interact with, and modulate activity of, AHR. AHR are relatively small, conserved sequences from different angiogenic peptides that are (largely) responsible for biological activity. They are cheaper to prepare than complete proteins; may be effective at lower doses; have long-lasting in vivo effect and good biodistribution following oral or parenteral administration. The present sequence represents a multivalent ligand peptide derivative:given in the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Angiogenic homology region; AHR; thrombospondin 1; TSP-1; angiostatin endostatin; anticancer; antiangiogenic; cancer; cardiovascular diseas obesity; osteoarthritis; duodenal ulcer; abnormal neovascularisation;
                                                                                                                                                                                                                                                                                                                                                                                   Claim 12; Fig 2; 76pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1999-601204/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ben-Sasson SA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          blood vessel occlusion.
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                                                                                                                                                                                                                                                                                                                                                    The present invention specifically describes peptides comprising the
                                                                                                                                                                                                                                                                                                                                                                                                                                       New peptides and derived multivalent ligands based on angiogenic homology regions, used to inhibit or promote angiogenesis, e.g. for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CHIL-) CHILDRENS MEDICAL CENT. (YISS ) YISSUM RES & DEV CO.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            healing; arteriosclerosis; ischaemia; diabetes mellitus;
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                                                                                                                                                                                                                                                                                                                                                                                                                       tumours
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Pred. No.
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67;
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                                                                                                                                                                     The present invention specifically describes peptide derivatives comprising an angiogenic homology region (AHR) of endostatin. The peptide derivatives can be used for modulating angiogenesis in humans and canimals. The peptides can be used to treat a wide variety of disease conditions, including cancer, cardiovascular diseases (e.g. arteriosclerosis, ischaemic limbs and ischaemic myocardium), obesity, contend the strains, duodenal ulcers, abnormal ocular neovascularisation contended to stimulate the growth of new blood vessels to bypass, e.g. blood vessel co-colusions. The peptide derivatives can also be used for the production of antibodies. The multivalent ligands may enable the administration of lower doses in order to achieve therapeutic efficacy, as compared with a univalent peptide chain. In addition, they can have long in vivo conclusions and good biodistribution when administered orally or conclusions. The present sequence represents a multivalent ligand conclusions and provided derivative given in the present invention.
                                                            Query Match
Best Local Similarity
Matches 5; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Angiogenic homology region; AHR; thrombospondin 1; TSP-1; angiostatin; endostatin, anticancer; antiangiogenic; cancer; cardiovascular disease; obesity; osteoarthritis; duodenal ulcer; abnormal neovascularisation; wound healing; arteriosclerosis; ischaemic limb; ischaemic myocardium; diabetes mellitus; blood vessel occlusion.
                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New angiogenic peptide derivatives, used for treating e.g. cardiovascular diseases, obesity, osteoarthritis, duodenal abnormal neovascularisation and for wound healing -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1999-591075/50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ben-Sasson SA,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Multivalent ligand Tip-18.40 peptide derivative.
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wrlshrpkdlysiv 15
                             WELADQPQNLEEIL
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                                                                                                                                              20 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fig 3; 62pp;
                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
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                                                                            28.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   English.
                                                            Score 32; DB Pred. No. 81; 5; Mismatches
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                                                                                              20;
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                                                              4.
                                                                                            Length 20;
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Query Match
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RESULT
Y42236
 The present invention specifically describes peptides comprising the CC anglogenic homology region (AHR) of thrombospondin (TSP) 4, anglostatin, CC endostatin or TSP-1. Multivalent ligands based on the peptides and CC related anglogenic peptides may be anti-anglogenic, e.g. for treating CC tumours, cardiovascular disease (arteriosclerosis, ischaemia), obesity, CC osteoarthritis, duodenal ulcers, abnormal ocular vascularisation in CC diabetes, or they are proanglogenic, e.g. for promotion of wound CC the aling and to stimulate neovascularisation around occluded blood completes, or they are proanglogenic, e.g. for promotion of wound CC wessels (a potential alternative to by-pass surgery or angloplasty). CC wessels (a potential alternative to by-pass surgery or angloplasty). CC way also be used raise peptide-specific antibodies (used for detecting CC and modulate activity of, AHR. AHR are relatively small, conserved cc esquences from different angiogenic peptides that are (largely) conspicted proteins; may be effective at lower doses; have long-lasting CC in vivo effect and good biodistribution following oral or parenteral CC administration. The present sequence represents a multivalent ligand cc hybrid peptide given in the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           endostatin; anticancer; antiangiogenic; cancer; cardiovascular disease; obesity; osteoarthritis; duodenal ulcer; abnormal neovascularisation; wound healing; arteriosclerosis; ischaemia: disharro mollicarisation;
                                                                                                                                                                                                                                                                                                                                                                                              Claim 7; Fig 2; 76pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Y42236 standard; peptide;
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                              New peptides and derived multivalent ligands based on angiogenic homology regions, used to inhibit or promote angiogenesis, e.g. itreating tumours \cdot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-601204/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ben-Sasson SA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-SEP-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  blood vessel occlusion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Multivalent ligand Tip-15.40 hybrid peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (CHIL-) CHILDRENS MEDICAL CENT. (YISS ) YISSUM RES & DEV CO.
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                                                                                                                                                                                                                                                                                                                                                                                                English.
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                                                                                                                                                                                                                                                                                                                                              angiostatin,
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RESULT
Y34179
This sequence represents a fragment of the human pre-proheparanase of the CC invention. The pre-proheparanase sequence was isolated from human complete the pre-proheparanase can be used for identifying agents which alter heparanase activity. The heparanase can be used for wound healing or for the heparanase activity. The heparanase can be used for wound healing or for chocking angiogenesis or inflammation. It can be used for treating ce.9. psoriasis, diabetic retinopathy or solid tumours, or for the degradation of heparin and the neutralisation of heparin's anticoagulant properties during surgery. Inhibitors of heparanase activity can be used in the treatment of arthritis, asthma, and other inflammatory diseases, composed the convenient edisorders, and central nervous system (CNS) and neurodegenerative disorders, and central nervous system (CNS) and convenient edisorders, and central nervous system (CNS) and convenient edisorders, and contral nervous system (CNS) and heparanase isolated from human platelet activity, allows for the convenient selection of compounds having anti-heparanase activity. Inhibitors of heparanase activity, by measured by blocking heparanase-mediated release of radioactive fragments from in two radiolabelled (HSPG)/heparin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated platelet heparanase polypeptides, used to develop products for, e.g. wound healing and blocking angiogenesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-MAR-1998;
24-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             inflammation; psoriasis; diabetic retinopathy; solid tumour; an heparin degradation; anticoagulant neutralisation; asthma; CNS inflammatory disease; vascular restenosis; atherosclerosis; dis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 3; Fig 8; 57pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumour growth;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human pre-proheparanase protein sequence fragment #6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Y34179 standard; peptide; 17 AÅ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pre-proheparanase; platelet; wound healing; angiogenesis blocker;
mation; psoriasis; diabetic retinopathy; solid tumour; arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ! Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Heinrikson RL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-0079401.
98US-0075706.
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Pred. No. 72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mildner AM
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Sequence

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                            sequences from different angiogenic peptides that are (largely) responsible for biological activity. They are cheaper to prepare than complete proteins; may be effectively lower doses; have long-lasting in vivo effect and good biodistribution following oral or parenteral administration. The present sequence represents a multivalent ligand peptide derivative given in the present invention.
                                                                                                                                                                       related angiogenic peptides may be anti-angiogenic, e.g. for treating tumours, cardiovascular disease (arteriosclerosis, ischaemia), obesity, osteoarthritis, duodenal ulcers, abnormal ocular vascularisation in diabetes, or they are proangiogenic, e.g. for promotion of wound healing and to stimulate neovascularisation around occluded blood vessels (a potential alternative to by pass surgery or angioplasty). The multivalent ligands may be used in human or veterinary medicine. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Angiogenic homology region; AHR; thrombospondin 1; TSP-1; angiostatin; endostatin; anticancer; antiangiogenic; cancer; cardiovascular disease obesity; osteoarthritis; duodenal ulcer; abnormal neovascularisation; wound healing; arteriosclerosis; ischaemia; diabetes mellitus;
                                                                                                                                                                                                                                                                                     angiogenic homology region (AHR) of thrombospondin (TSP) 4, and endostatin or TSP-1. Multivalent ligands based on the peptides
                                                                                                                                                                                                                                                                                                                      The present invention specifically describes peptides comprising the
                                                                                                                                                                                                                                                                                                                                                    Claim 12; Fig 2; 76pp;
                                                                                                                                                                                                                                                                                                                                                                                                 New peptides and derived multivalent ligands based on angiogenic homology regions, used to inhibit or promote angiogenesis, e.g. i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ben-Sasson SA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-MAR-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Y42241 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                  treating tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-601204/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CHIL-) CHILDRENS MEDICAL CENT (YISS ) YISSUM RES & DEV CO.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
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                                                                                                                         also be used raise peptide-specific antibodies (used for detecting peptides) and to identify and isolate compounds that interact with modulate activity of, AHR. AHR are relatively small, conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vesser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4; Conservative
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                                                                                                                                                                                                                                                                                                                                                      English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
Pred.
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RESULT
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Matches 5
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                                                                                                                                                                          osteoarthritis, duodenal ulcers, abnormal ocular neovascularisation associated e.g. with diabetes mellitus, and to promote wound healing or to stimulate the growth of new blood vessels to bypass, e.g. blood vessel occlusions. The peptide derivatives can also be used for the production of antibodies. The multivalent ligands may enable the administration of lower doses in order to achieve therapeutic efficacy, as compared with a univalent peptide chain. In addition, they can have long in vivo lifetimes and good biodistribution when administered orally or parenterally. The present sequence represents a multivalent ligand Tip-18.40 peptide derivative given in the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New angiogenic peptide derivatives, used for treating e.g. cancer, cardiovascular diseases, obesity, osteoarthritis, duodenal ulcers, abnormal neovascularisation and for wound healing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Angiogenic homology region; AHR; thrombospondin 1; TSP-1; angiostatin; endostatin; anticancer; antiangiogenic; cancer; cardiovascular disease; obesity; osteoarthritis; duodenal ulcer; abnormal neovascularisation; wound healing; arteriosclerosis; ischaemic limb; ischaemic myocardium; diabetes mellitus; blood vessel occlusion.
                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                        conditions, including cancer, cardiovascular diseases (e.g. arteriosclerosis, ischaemic limbs and ischaemic myocardium), obesity,
                                                                                                                                                                                                                                                                                                                                                           animals. The peptides can be used to treat a wide variety of disease conditions, including cancer, cardiovascular diseases (e.g.
                                                                                                                                                                                                                                                                                                                                                                                         The present invention specifically describes peptide derivatives comprising an angiogenic homology region (AHR) of endostatin. The derivatives can be used for modulating angiogenesis in human and
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Fig 3; 62pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-591075/50.
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                                                                   Local Similarity
nes 5; Conser
2 wrlshrpkdlysiv 15
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                                2 WELADQPQNLEEIL 15
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Matches Query Match Best Local

Conservative

5

Mismatches 90;

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Gaps

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Score 32; Pred. No.

Length 22 Indels

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                                   vessels (a potential alternative to by pass surgery or angioplasty). The multivalent ligands may be used in human or veterinary medicine. They may also be used raise peptide-specific antibodies (used for detecting the peptides) and to identify and isolate compounds that interact with, and modulate activity of, AHR. AHR are relatively small, conserved sequences from different angiogenic peptides that are (largely) responsible for biological activity. They are cheaper to prepare than complete proteins; may be effective at lower doses; have long-lasting in vivo effect and good biodistribution following oral or parenteral administration. The present sequence represents a multivalent ligand hybrid peptide given in the present invention.
                                                                                                                                                                                                                                                                                         The present invention specifically describes peptides comprising the angiogenic homology region (AHR) of thrombospondin (TSP) 4, angiostatic endostatin or TSP-1. Multivalent ligands based on the peptides and related angiogenic peptides may be anti-angiogenic, e.g. for treating tumours, cardiovascular disease (arteriosclerosis, ischaemia), obesit osteoarthritis, duodenal ulcers, abnormal ocular vascularisation in diabetes, or they are proangiogenic, e.g. for promotion of wound healing and to stimulate neovascularisation around occluded blood healing and to stimulate neovascularisation around occluded blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New peptides and derived multivalent ligands based on angiogenic homology regions, used to inhibit or promote angiogenesis, e.g. i treating tumours \, -
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Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 7; Fig 2; 76pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-601204/51.
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                                                                                               Query Match
                                                                                                                                                                             vessels (a potential alternative to by-pass surgery or angioplasty). The multivalent ligands may be used in human or veterinary medicine. They may also be used raise peptide-specific antibodies (used for detecting the peptides) and to identify and isolate compounds that interact with, and modulate activity of, AHR. AHR are relatively small, conserved sequences from different angiogenic peptides that are (largely) responsible for biological activity. They are cheaper to prepare than complete proteins; may be effective at lower doses; have long-lasting in vivo effect and good biodistribution following oral or parenteral administration. The present sequence represents a multivalent ligand peptide derivative given in the present invention.
                                                                                                                                                                                                                                                                                                                                                                   The present invention specifically describes peptides comprising the angiogenic homology region (AHR) of thrombospondin (TSP) 4, angiostatic endostatin or TSP-1. Multivalent ligands based on the peptides and related angiogenic peptides may be anti-angiogenic, e.g. for treating tumours, cardiovascular disease (arteriosclerosis, ischaemia), obesit osteoarthritis, duodenal ulcers, abnormal ocular vascularisation in diabetes, or they are proangiogenic, e.g. for promotion of wound healing and to stimulate neovascularisation around occluded blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Anglogenic homology region; AHR; thrombospondin 1; TSP-1; anglostatin; endostatin; anticancer; antianglogenic; cancer; cardiovascular disease; obesity; osteoarthritis; duodenal ulcer; abnormal neovascularisation; wound healing; arteriosclerosis; ischaemia; diabetes mellitus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 12; Fig 2; 76pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New peptides and derived multivalent ligands based on angiogenic homology regions, used to inhibit or promote angiogenesis, e.g. for treating tumours \,
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                                                                                                                                                  Sequence
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                                                                                   Local
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                                                                 Conservative
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17
                                                                                 28.3%;
35.7%;
                                                                               Score 32;
Pred. No.
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Mismatches
                                                                                                 20;
                                                                 4.
                                                                                           Length 22;
                                                                 Indels
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RESULT Y43404

23

RESULT Y43408 ID Y4 XX XX XX DT 20

Y43408 standard;

peptide;

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20-DEC-1999 Y43408;

(first entry)

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The present invention specifically describes peptide derivatives comprising an angiogenic homology region (AHR) of endostatin. The peptide derivatives can be used for modulating angiogenesis in humans and canimals. The peptides can be used to treat a wide variety of disease conditions, including cancer, cardiovascular diseases (e.g. arteriosclerosis, ischaemic limbs and ischaemic myocardium), obesity, costeoarthritis, duodenal ulcers, abnormal ocular neovascularisation constrained e.g. with diabetes mellitus, and to promote wound healing or to stimulate the growth of new blood vessels to bypass, e.g. blood vessel cocclusions. The peptide derivatives can also be used for the production of antibodies. The multivalent ligands may enable the administration of lower doses in order to achieve therapeutic efficacy, as compared with a univalent peptide chain. In addition, they can have long in vivo cifetimes and good biodistribution when administered orally or parenterally. The present sequence represents a multivalent ligand crip-15.40 hybrid peptide given in the present invention.
Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           New angiogenic peptide derivatives, used for treating e.g. cancer, cardiovascular diseases, obesity, osteoarthritis, duodenal ulcers, abnormal neovascularisation and for wound healing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (CHIL-) CHILDRENS MEDICAL CENT. (YISS) YISSUM RES & DEV CO.
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                                                                                        Sequence
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 Similarity
5; Conserv
                                                                                        22 AA;
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   Conservative
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                    Score 32;
Pred. No.
     Mismatches
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                    90;
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RESULT
Y42239
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                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention specifically describes peptide derivatives comprising an angiogenic homology region (AHR) of endostatin. The peptide derivatives can be used for modulating angiogenesis in humans and animals. The peptides can be used to treat a wide variety of disease conditions, including cancer, cardiovascular diseases (e.g. arteriosclerosis, ischaemic limbs and ischaemic myocardium), obesity, osteoarthritis, duodenal ulcers, abnormal ocular neovascularisation associated e.g. with diabetes mellitus, and to promote wound healing or to stimulate the growth of new blood vessels to bypass, e.g. blood vessel cocclusions. The peptide derivatives can also be used for the production of antibodies. The multivalent ligands may enable the administration of lower doses in order to achieve therapeutic efficacy, as compared with a univalent peptide chain. In addition, they can have long in vivo iffetimes and good biodistribution when administered orally or parenterally. The present sequence represents a multivalent ligand or the production of parenterally. The present sequence represents a multivalent ligand
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New angiogenic peptide derivatives, used for treating e.g. cardiovascular diseases, obesity, osteoarthritis, duodenal abnormal neovascularisation and for wound healing
                                            Multivalent ligand Tip-17.40 peptide derivative
                                                                                                                                                Y42239 standard; peptide; 23 AA
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Angiogenic homology region; AHR; thrombospondin 1; TSP-1; angiostatin; endostatin; anticancer; antiangiogenic; cancer; cardiovascular disease;

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Search completed: February Job time: 625 sec

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Query Match
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                                                                                                                                                                                                                                                                                       Sequence
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5 wrlshrpkdlysiv 18
                                                            2 WELADQPQNLEEIL 15
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                                                                                                                                                              Score 32; DB Pred. No. 95;
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Run on:
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                                                                                                  protein search, using sw model
February 5, 2001, 10:49:28; Search time 58.67 Seconds (without alignments) 23.147 Million cell updates/sec
                                                                                                                                                                           GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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Title: Perfect score: Sequence: US-08-981-824-3 113 1 NWELADOPONLEEILMHCQT 20

Scoring table: BLOSUM62 Gapop 10.0 , Gapext 0.5

195891 seqs, 67900655 residues

Total number of hits satisfying chosen parameters: 5001

Minimum DB seq length: 0
Maximum DB seq length: 25

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

PIR\_66:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

29.	28	27	26	25	24	23	22	21	20	. 19	. 18	17	. 16	. 15	14	13	12	11	10	9	œ	7	σ	ъ	4	ω	2	1	Result No.	
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orf3 3	alpha-g	alpha-a	alkaline	Ser/Thr	hypothe	PEB1 5'-	estrogen	antifungal	beta-G	T-cell	protein	TcR de	transa	transa	alcoho	alpha-	threon	ATP-de	heat s	T-cell	precorr	biphenyl	bombyxin-IV	aminog	H+-tra	hypothet		ge	Description	
of madA	liadin	mylase	ne tryps	prote	ical	н	en receptor	2S	ne	receptor	n QA100028	TcR delta chain	ldolase	transaldolase (EC	1 dehydro	2-macroglobu	threonine dehydra	ATP-dependent clp	shock protei	receptor	₽	yl dioxygena	in-IV chain	aminoglycoside	nsporting	othetical prote	(EC 3.5.	tigen	ption	
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18.6	19.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
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S63696	B29175	PQ0716	S22228	PC2204	A45336	S55308	S61306	A60684	I65270	S11416	S00493	JN0263	T46625	A26228	в31263
DNA polymerase – y	clostripain (EC 3.	Glutelin 7.3/31K -	vitronectin - dog	interferon-alpha L	cystic fibrosis tr	glutathione transf	probable nitrate r	L-ascorbate peroxi	collagen alpha 1(I	ribosomal protein	hemocyanin chain I	antigen (clone PV1	hypothetical prote	spot 42 protein -	dihydrofolate redu

## ALIGNMENTS

Qy 10 NLEEILMH 17               Db 6 NFEELLIH 13	Query Match 27.4%; Score 31; DB 2; Length 17; Best Local Similarity 62.5%; Pred. No. 1.1e+02; Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps	RESULT 1 B48943 phage antigenic determinant (clone pOA79) - phage phi-197 (fragment) C; Species: phage phi-197 C; Date: 13-Aug-1997 *sequence_revision 19-Dec-1997 *text_change 19-Dec-1997 C; Accession: B48943 R; Schouler, C.; Bouet, C.; Ritzenthaler, P.; Drouet, X.; Mata, M. Appl. Environ. Microbiol. 58, 2479-2484, 1992 A; Title: Characterization of Lactococcus lactis phage antigens. A; Reference number: A48943; MUID:92384563 A; Contents: Lactococcus lactis A; Accession: B48943 A; Contents: Lactococcus lactis A; Accession: B48943 A; Contents: Sequence modified after extraction from NCBI backbone A; Note: sequence modified after extraction from NCBI backbone A; Note: sequence extracted from NCBI backbone (NCBIN:114551)
	Gaps 0;	ac-1997

RESULT F49215

urease (EC 3.5.1.5) small chain UreA - Helicobacter mustelae (ATCC 43772) (fragment) C;Species: Helicobacter mustelae C;Species: Helicobacter mustelae C;Species: Helicobacter mustelae C;C;Date: 19-Dec-1993 #sequence\_revision 25-Apr-1997 #text\_change 30-May-1997 C;Accession: F49215 R;Turbett, G.R.; Hoj, P.B.; Horne, R.; Mee, B.J. Infect. Immun. 60, 5259-5266, 1992 A;Title: Purification and characterization of the urease enzymes of Helicobacter spec A;Reference number: A49215; MUID:93084378 A;Accession: F49215 MUID:93084378 A;Accession: F49215 A;Status: preliminary A;Molecule type: protein A;Residues: 1-18 <TUR> A;Molecule type: protein A;Residues: 1-18 <TUR> A;Note: sequence extracted from NCBI backbone (NCBIP:119487) C;Superfamily: urease 26K chain; urease 11K chain homology; urease 12K chain homology C;Keywords: hydrolase

Query Match Best Local Similarity 30.0 Matches 3; Conservative 24.8%; 30.0%; Score 28; DB 2; Le Pred. No. 3.5e+02; 6; Mismatches 1; Length 18; Indels 0; Gaps 0

Ş 8 PQNLEEILMH 17

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A;Title: Biosynthesis of butirosin in Bacillus circulans NRRL B3312: identification by A;Reference number: Z18808; MUID:94374689
A;Accession: T17886
                                                                                                                                                                                                                                                                                 C; Accession: T17886
R; Aubert-Pivert, E.;
Gene 147, 1-11, 1994
                                                                                                                                                                                                                                                                                                                                                                                         aminoglycoside phosphotransferase - Bacillus circulans (fragment)
C;Species: Bacillus circulans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 0
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A;Title: Isolation of CF(0)CF(1) from Chlamydomonas reinhardtii cwl5 and the N-terminal A;Reference number: S68388; MUID:96128220
A;Accession: S68391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     H+-transporting ATP synthase (EC 3.6.1.34) delta chain, chloroplast - Chlamydomonas reli
N,Alternate names: ATP synthase delta chain
C;Species: Chlamydomonas reinhardtii
C;Date: 04-Dec_1997 #sequence_revision 12-Dec-1997 #text_change 17-Mar-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                         A;Residues:
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A; Residues: 1-24 <FIE>
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A; Residues: 1-18 < VAN>
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A; Accession: S10452
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Matches 5
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;Keywords: ATP biosynthesis; chloroplast; hydrolase; membrane-associated complex; thyl;
        :Cross-references:
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nes 6; Conserv
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                                             <AUB>
EMBL:L20421; NID:g304142; PID:g688437; PIDN:AAA62589.1
                                                                                                                                                                                                                                                                                                                       Davies, J.
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Pred. No. 7.1e+02;
"" matches 3;
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Pred. No. 5.2e+02;
3; Mismatches 4
                                                                                                                    from GB/EMBL/DDBJ
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C;Superfamil
C;Keywords:
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Rgric. Biol. Chem. 52, 3035-3041, 1988
A;Title: Isolation and primary structure of bombyxin-IV, a A;Title: number: JT0410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Genetics:
A;Gene: aphA4/butA
C;Function:
A;Pathway: butirosin biosynthesis
C;Superfamily: kanamycin kinase
                                                                                                                                                                                                                                                               R;Hofer, B.; Eltis, L.D.; Dowling, D.N.; Timmis, K.N. Gene 130, 47-55, 1993
A;Title: Genetic analysis of a Pseudomonas locus encoding a pathway for biphenyl/poly A;Reference number: PN0632; MUID:93345822
A;Accession: PN0632
                                                                                                                                                                                                                                                                                                                                                            C;Species: Pseudomonas sp.
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 12-Apr-1995
C;Accession: PN0632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Superfamily: insulin F;6-11/Disulfide bonds: #status predicted F;7/Disulfide bonds: interchain (to chain B-10) #status predicted F;7/Disulfide bonds: interchain (to chain B-22) #status predicted F;20/Disulfide bonds: interchain (to chain B-22) #status predicted
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A; Residues: 1-25 < HOF>
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C;Accession: JT0410
                                                                                                                                                                        A;Gene: bphA4
                                                                                                                                                                                                            A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                    biphenyl dioxygenase (EC 1.13.-.-) A4 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        bombyxin-IV chain A - silkworm
                                 Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                        Genetics:
                                                                                                                                Superfamily: toluene dioxygenase ferredoxin reductase component 
Keywords: oxidoreductase; PCB biodegradation
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em. 52, 3035-3041, 1988
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3; Mismatches
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No. 1.3e+03;
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                                                         1.5e+03
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QLQDVGSNLRDLL 20

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A; Molecule type: protein
A; Residues: 1-33 < TOS
A; Experimental source: brain
C; Superfamily: heat shock protein 90
C; Keywords: cytosol; estrogen-induced protein;
                                                                                                                                                          R:Itoh, H.; Toyoshima, I.; Mizunuma, H.; Kóbayashi, R.; Tashima, Y. Arch. Biochem. Blophys. 282, 290-296, 1990
A:Title: Three-step purification method and characterization of the bovine brain A;Reference number: S13268; MUID:91053144
A;Accession: S13268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: EMBL:X60898
A;Experimental source: T lymphocyte
C;Keywords: T-cell receptor
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A:Reference number: PH0746; MUID:92078846

A:Accession: PH0793
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J. Exp. Med. 174, 1371–1383, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              T-cell receptor alpha chain (H2 V-alpha-7.2) - mouse (fragment) C;Species: Mus musculus (house mouse) C;Decies: Mus musculus (house mouse) C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-May-1997 C;Accession: PH0793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Roessner, C.A.; Warren, FEBS Lett. 301, 73-78, 19 A;Title: Expression of 9
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                                                                                                                                                                                                                                                                 heat shock protein, 90K - bovine (fragment)
C:Species: Bos primigenius taurus (cattle)
C:Date: 19-Mar-1997 #sequence_revision 10-Oct-1997
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A; Residues: 1-19 < CAS>
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C;Species: Salmonella typhimurium
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Matches 4
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;Date: 22-
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4 WELA 7
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21.2%;
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Pred. No. 8.9e+02;
l; Mismatches 1;
Score
Pred.
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3. 1.6e+03;
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DB 2;
2e+03;
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                                                                       shock;
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Qy .
alpha-2-macroglobulin - Atlantic horseshoe crab (fragments)
C; Species: Limulus polyphemus (Atlantic horseshoe crab)
C; Date: 19-Mar-1998 #sequence_revision 17-Apr-1998 #text_ch
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C; Keywords:
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A;Title: Chemical characterization of biodegradative threonine dehydratases
A;Reference number: A90645; MUID:83023208
A;Accession: B22317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          threonine dehydratase (EC 4.2.1.16) - Salmonella typhimurium (fragment) C;Species: Salmonella typhimurium C;Date: 05-Jun-1987 #sequence_revision 05-Jun-1987 #text_change 22-Nov-
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A; Gene: clpP
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A; Residues: 1-24 <HUE>
A; Cross-references: EMBL:x89562; NID:g899304;
A; Note: the nucleotide sequence was submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Huebschmann, T.; Hess, W.R.; Boerner, T.
Plant Mol. Biol. 30, 109-123, 1996
A;Hitle: Impaired splicing of the rps12 transcript
A;Reference number: S65047; MUID:96197402
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R; Kim, S.S.; Datta, P.
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Library, July 1995
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07-May-1999

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C;Accession: S71387

R;Dolmer, K.; Husted, L.B.; Armstrong, P.B.; Sottrup-Jensen, -.
FEBS Lett. 393, 37-40, 1996

A;Title: Localisation of the major reactive lysine residue involved

A:Reference number: S71387; MUID:96397525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Date: C; Accession: A12872 C; Accession: A12872 R; Sun, S.C.; Joris, L.; Tsolas, O. R; Sun, S.C.; Joris, L.; Tsolas, O. R; Ts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
S66198
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"hehes 3; Conserv
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C;Keywords: transferase
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         transaldolase (EC 2.2.1.2) I - yeast (Pichia jadinii) (fragment)
C;Species: Pichia jadinii, Candida utilis
C;Date: 05-Jun-1987 #sequence_revision 05-Jun-1987 #text_change 30-Sep-1993
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A;Residues: 1-17 <HJE>
C;Superfamily: alcohol dehydrogenase; long-chain alcohol dehydrogenase homology
C;Keywords: alcohol metabolism; NAD; oxidoreductase
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A;Molecule type: protein
A;Residues: 1-13;14-25 < POL>
C;Keywords: dimer; disulfide bond; proteinase inhibitor
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FEBS Lett. 367, 237-240, 1995
A;Title: Multiplicity of N-terminal structures
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Pisum sativum (garden pea)
C;Date: 14-Feb-1997 #sequence_revision 29-Aug-1997 #text_change 12-Jun-1998
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2.2e+03;
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.7e+03;
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A;Title: Mouse autoreactive gamma/delta T A;Reference number: A49037; MUID:92164730 A;Accession: F49037
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F49037
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                                                                                                                A; Molecule type: protein A; Residues: 1-15 < KAM>
                                                                                                                                                                                              R;Kamo, M.; Kawakami, T.; Miya
submitted to JIPID, July 1994
A;Description: Separation and
                                                                                                                                                                                                                                                       protein QA100028 - Arabidopsis thaliana (fragment) C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 30-Jun 1992 #sequence_revision 06-Jan-1995 C;Accession: PA0020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GB:S90654; NID:g246298; PIDN:AAB21552.1; PID:g246299 A;Experimental source: dendritic epidermal T-cell lines A;Note: sequence extracted from NCBI backbone (NCBIN:90654, NCBIP:90666)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-14 <EZQ>
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C;Species: Mus musculus (house mouse)
C;Date: 21-Jan-1994 #sequence_revision 18-Nov-1994 #text_change 05-Nov-1999
C;Accession: F49037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: protein
A;Residues: 1-9 <TSO>
C;Keywords: transferase
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                                                                                                A; Experimental source: callus
                                                                                                                                                           A; Accession: PA0020
                                                                                                                                                                         A; Reference number: PA0001
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                                                                                                                                                                                                                                       T.; Miyatake, N.; Tsugita,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D.B.; McConnell, T.J.; Sturmhofel, K.; Valas, R.B.; Shevach,
                    20.4%;
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Score 23; DB 2; Le
Pred. No. 1.8e+03;
1; Mismatches 2;
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2e+05;
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C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 07-May-1999
C;Accession: PN0149
R;Odintsova, T.I.; Egorov, T.A.
Biokhimiia 55, 509-516, 1990
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A;Restdues: 1-15 <DURS-
A;Cross-references: EMBL:228344; NID:g607122; PIDN:CAA82198.1; PID:g607123
C;Keywords: T-cell receptor
                                                 A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-20 <TER>
                                                                                                                     R;Terras, F.R.; Schoofs, H.M.; De Bolle, M.F.; Van Leuven, F.; Rees, S.B.; Vanderleyden, J. Blol. Chem. 267, 15301-15309, 1992
A;Title: Analysis of two novel classes of plant antifungal proteins from radish (Raphanu A; Reference number: A42842; MUID:92348373
A; Accession: D42842
                                                                                                                                                                                                                                       antifungal 2S storage albumin large chain - radish (fragment)
C:Species: Raphanus sativus (radish)
C:Date: 27-Apr-1993 #sequence_revision 18-Nov-1994 #text_change 12-Apr-1995
C:Accession: D42842
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Thes 4; Conserv
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A; Accession: S51735
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R; Durinovic-Bello, 1
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A;Accession: PN0149
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;Species: Homo sapiens (man)
;Date: 07-May-1995 #sequence_revision 01-Sep-1995 #text_change 05-Nov-1999
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Best Local Similarity 57.1%;
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  sequence extracted
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                        source: seed

    Aegilops longissima (fragment)

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20.4%; Score 23; DB 2; L
100.0%; Pred. No. 2.2e+03;
  from NCBI backbone (NCBIP:109925)
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Pred. No. 1.8e+03;
2; Mismatches 1
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A; Description: A cosmid clone mapped
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R;Pei, Z.; Blaser, M.J.
J. Biol. Chem. 268, 18717-18725, 1993
A;Title: PEB1, the major cell-binding factor of Campylobacter jejuni, A;Reference number: A48518; MUID:93366784
A;Accession: D48518
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-21 <PEI>A;Cross-references: GB:L13662
                                        hypothetical protein - human (;SpecLes: Romo sapiens (man) C;SpecLes: Romo sapiens (man) C;Date: 08-May-1995 #sequence_revision 21-Jul-1995 #text_change 05-Nov-1999 C;Accession: S52357
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A;Accession: $15861
A;Molecule type: protein
A;Residues: 1-20 <BIO>
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R;Agryrokastritis, A.; Leversha, M.A.; Ferguson-Smith, submitted to the EMBL Data Library, March 1993
                                                                                                                                                 RESULT 24
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C;Date: 04-Dec-1992 #sequence_revision 04-Dec-1992 #text_change 30-May-1997
C;Accession: S15861
R;Thole, H.H.; Jungblut, P.W.; Jakob, F.
Biochem. J. 276, 709-714, 1991
A;Title: The proton-driven dissociation of oestradiol-receptor dimers as a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   estrogen receptor -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PEB1 5'.region hypothetical protein A - Campylobacter jejuni (fragment) C;Species: Campylobacter jejuni C;Species: Campylobacter jejuni C;Date: 19-May-1995 #sequence_revision 19-May-1995 #text_change 19-May-1995 C;Date: 19-May-1995 #sequence_revision 19-May-1995 #text_change 19-May-1995 C;Accession: D48518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Keywords: steroid hormone receptor
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Best Local Similarity
Matches 4; Conserv
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Best Local Similarity 40.0%;
Matches 4; Conservative
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Best Local :
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les 4; Conserv
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fa domestica (domestic
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Pred. No. 2.6e+03;
3; Mismatches 1
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Pred. No. 2.5e+03;
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C;Species: Caenorhabditis elegans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 02-Jun-2000
C;Accession: T42258
R;Zeke, T.; Gergely, P.; Dombradi, V.
submitted to the EMBL Data Library, July 1996
A;Description: The Catalytic subunits of Ser/Thr protein phosphatases from Caenorhabditi
A;Reference number: Z22131
A;Accession: T42258
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Molecule type: D
Search completed: February 5, 2001, 10:49:29
Job time: 742 sec
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A;Accession: S52357
A;Status: preliminary
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-22 <AGR>
A;Residues: 1-22 <AGR>
A;Cross-references: EMBL:X72881; NID:g667002; PIDN:CAA51393.1; PID:g667004
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Best Local Similarity 50.0%;
Matches 6; Conservative
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12 LGEQRANTEE 21
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1 QSIHLLRILMTC 12
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Title:
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Maximum Match 100%
Listing first 45 summaries
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Query
Match
February 5, 2001, 10:55:58; Search time 32.57 Seconds (without alignments)
19.831 Million cell updates/sec
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Gapop 10.0 , Gapext 0.5
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113
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Copyright (c) 1993 - 2000 Compugen Ltd.
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 В
            ETFA_CLOPA
OXLA_OPHHA
DFTS_RAT
PSAL_SYNVU
RAN_XENLA
NPA_BOYLA
NPA_BOYLA
GON1_ALLMI
RBS_PHYPA
BOL2_MEGPE
BOL4_MEGPE
GSHX_PINPS
COXE_ONCMY
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CLPPALTY
TAL1_PICJA
TAL1_PICJA
TAL1_PICJA
TAL3_PICJA
AKLA_AKKH
DHAB_COMTE
GON2_CHEPA
MOSO_CLVJA
MAPX_SOLTU
RL5_HALWE
RL5_HALWE
RL5_HALHA
FKB7_PINPS
GLN2_PINPS
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                                                                                                                                                                                                                                                                                                                                                                                                                              P19662 lactobacill
P4888 hordeum vul
P11954 salmonella
P17440 pichia jadi
P17441 pichia jadi
P81382 agkistrodon
P80704 comamonas t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                               7 thermus aqu
9 acanthamoeb
2 clostridium
3 ophiophagus
8 rattus norv
7 synechococc
1 xenopus lae
6 bos taurus
1 alligator m
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Result No.

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	P22949	P81666	P07494	P80533	P29259	P24927	P01515	P42716	P22442	P23356	P12663	P42017
	methanosarc	pinus pinas	megabombus	fasciola he		albizzia ju		parapolybia	bromelia pl	bos taurus	ovis aries	methanococc

## ALIGNMENTS

RESULT CLPP_H ID C AC O DT O DT O DT O	Dy Ka	STTTE COCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
LIT 2 LHORVU LCLPP_HORVU STANDARD; PRT; 24 AA. P48883; 01-FEB-1996 (Rel. 33, Created) 01-FEB-1996 (Rel. 33, Last sequence update) 01-NOV-1997 (Rel. 35, Last annotation update) PROBABLE CLPP-LIKE PROTEASE (EC 3.4.21.92) (ENDOPEPTIDASE CLP)	Query Match 22.1%; Score 25; DB 1; Length 23; Best Local Similarity 27.3%; Pred. No. 5.5e+02; Matches 3; Conservative 5; Mismatches 3; Indels 0; Gaps 0; 8 PONLEEILMHC 18 1:	LACCA LACCA  UDP_LACCA  UDP_LACCA  Ol-FEB-1991 (Rel. 17, Created) Ol-FEB-1991 (Rel. 17, Last sequence update) IS-JUL-1998 (Rel. 36, Last annotation update) URIDINE PHOSPHORYLASE (EC 2.4.2.3) (UDRPASE) (FRAGMENT). UDP. Lactobacillus casel. Bacteria; Firmicutes; Bacillus/Clostridium group; Lactobacillus. [1] Lactobacillus. [1] SEQUENCE. STRAINATCC 7469; MEDLINE-90381286; PubMed-2119230; MATCAMAN Y., Grossowicz N., Yashphe J.; AVVAHAM Y., Grossowicz N., Yashphe J.; Purification and characterization of uridine and thymidine phosphorylase from Lactobacillus casel."; Blochim. Blophys. Acta 1040:237-293(1990)

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Best Local S
Matches 5
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                       from two enteric bacteria.";
Biochim. Biophys. Acta 706:27-35(1982).
-!- CATALYTIC ACTIVITY: L-THREONINE + H(2)0 =
                                                                                                                                                            Salmonella typhimurium
                                                                                                                                                                                      THREONINE D (FRAGMENT).
                                                                                                                                                                                                                01-OCT-1989 (Rel. 01-FEB-1995 (Rel.
                                                                                                                                                                                                                                       P11954;
01-OCT-1989 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00381; CLP_PROTEASE_SER; PARTIAL. PROSITE; PS00382; CLP_PROTEASE_HIS; PARTIAL. Hydrolase; Serine protease; Chloroplast.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fc entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
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Huebschmann T., He
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chloroplast.
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Magnoliophyta; Liliopsida; Poales; Poaceae; Hordeum.
                                                             MEDLINE-83023208; PubMed-6751404;
Kim S.S., Datta P.;
"Chemical characterization of biodegradative threonine
                                                                                                                                  Salmonella.
                                                                                                                                                Bacteria;
                                                                                                                                                                                                                                                                      THD2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; X89562;
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                                                                                                        EQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATALYTIC ACTIVITY: HYDROLYSIS OF PROTEINS TO SMALL PEPTIDES IN THE PRESENCE OF ATP AND MAGNESIUM. ALPHA-CASEN IS THE USUAL TEST SUBSTRATE. IN THE ABSENCE OF ATP, ONLY OLIGOPEPTIDES SHORTER THAN FIVE RESIDUES ARE CLEAVED (SUCH AS SUCCINYL-LEU-TYR-I-NHMEC; AND LEU-TYR-LEU-TYR-TRP, IN WHICH THE CLEAVAGE OF THE -TYR-I-LEU-AND -TYR-I-TRP- BOND ALSO OCCURS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: BELONGS
 COFACTOR:
                                                                                                                                                                                                                                                                     SALTY
                                                                                                                                                                                                                                                                                                                                       EMIDKHCDT
                                                                                                                                                                                                                                                                                                                                                                                          Similarity 55.
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)95 (Rel. 31, 1
E DEHYDRATASE (
                                                                                                                                             Proteobacteria;
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PYRIDOXAL PHOSPHATE
                                                                                                                                                                                                                                                                     STANDARD;
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ess W., Boerner T.;
g of the rps12 transcript in ribosome-deficient
                                                                                                                                                                                                                                            12, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            2941 MW;
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Last annotation update)
CATABOLIC (EC 4.2.1.16)
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Pred. No.
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TAL1_PICJA
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01-AUG-1990 (Rel. 15, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
TRANSALDOLASE I (EC 2.2.1.2) (FRAGMENT).
Pichia jadinii (Yeast) (Candida utilis).
Eukaryota; Fungi; Ascomycota; Saccharomycetes;
Saccharomycetaceae; Pichia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIR; B22;
STYGENE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULES OF AMP, WHICH ACTS AS AN ALLOSTERIC ACTIVATOR TO ENZYME. THE ENZYME IS ALSO INHIBITED BY ALPHA-KETO ACIDS P CATABOLITES. IT IS ALLOSTERICALLY INHIBITED BY ISOLEUCINE AND ALLOSTERICALLY ACTIVATED BY VALINE.

1- PATHMAY: THREONINE CATABOLISM.

1- SUBUNIT: HOMOTETRAMER.

1- SIMILARITY: TO THREONINE DEHYDRATASE BIOSYNTHETIC AND SERI
                                                                                                                                                                                                                  Arch. Biochem. Biophys. 178:69-78(1977).

-:- FUNCTION: TRANSALDOLASE IS IMPORTANT FOR THE BALANCE OF METABOLITES IN THE PENTOSE-PHOSPHATE PATHWAY.

-:- CATALITIC ACTIVITY: SEDOHEFULOSE 7-PHOSPHATE + D-GLYCERALDEHYDE 3-PHOSPHATE -D-ERYTHROSE 4-PHOSPHATE + D-FRUCTOSE 6-PHOSPHATE.

-:- PATHWAY: NONOXYDATIVE PART OF THE PENTOSE-PHOSPHATE PATHWAY.

-:- SIMILARITY: BELONGS TO THE TRANSALDOLASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lyase; |
                                                                                                                                                                                                                                                                                                                                                 MEDLINE-77110646; PubMed-556924; Sun S.C., Joris L., Tsolas O.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <del>-</del>
                                                                                                                                                                                                                                                                                                               Candida utilis.";
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                                                                                                                                                                                                                                                                                                                                       Sun S.C., Joris L., Tsolas O.; "Purification of crystallization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P17440;
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ENE; SG10390; TDCB.
RPRO; IPR000634; -.
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3; Conserv
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Pred. No.
                                                             Score 23; I
Pred. No. 8.
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TRANSALDOLASE III (EC 2.2.1.2) (FRAGMENT).
Pichla jadinii (Yeast) (Candida utilis).
Eukaryota; Fungi; Ascomycota; Saccharomycetes;
Saccharomycetaceae; Pichia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LT 6
                                                 P81382;
15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
1-AMINO ACID OXIDASE (EC 1.4.3.2) (LAO) (LAAO) (FRAGMENT).
Agkistrodon rhodostoma (Malayan pit viper) (Calloselasma rhodostom Agkistrodon arhayan: Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAL3_PICJA
P17441;
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                  Oxidoreductase; Flavoprotein; NON_TER 20 20
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                                                                                                                                                                                                                                                                                                                                                           ia; Squamata; Scleroglossa
Crotalinae; Calloselasma.
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20 AA;
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15, Last seq
2443 MW;
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1; Mismatches
962660598D7F7D07 CRC64;
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8.9e+04;
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Luykx D.M.A.M., Kim S.W., d
Submitted (JUL-1996) to the
-i- CATALYTIC ACTIVITY: AN
REDUCED ACCEPTOR.
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P80704;
01-OCT-1996 (Rel. 3
01-OCT-1996 (Rel. 3
15-DEC-1998 (Rel. 3
                                                                                                                                                                                                                     GON2_CHEPR P80678;
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01-OCT-1996 (Rel. 34, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
ALDEHYDE DEHYDROGENASE, BETA CHAIN (EC 1.2.99.3) (ALDH) (FRAGMENT).
Comamonas testosteroni (Pseudomonas testosteroni).
                                                                                                                                                           Chelyosoma
Eukaryota;
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01-NOV-1997 (Rel.
15-DEC-1998 (Rel.
                                                                                                                                                                                                                                                                                                                                                        Oxidoreductase; Molybdenum NON_TER 19 19
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-1- SUBUNIT: HETEROTRIMER
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35, Last sequence update)
37, Last annotation update)
(GONADOTROPIN-RELEASING HORMONE
                                                                                                                                                                                                                                                                                                                                              2096 MW;
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Pred. No.
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Pred. No.
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Hormone;
MOD_RES
DISULFID
MOD_RES
                                                                                                                                                                                                                                                                                              01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
UNIDENTIFIED MITOCHONDRIAL MATRIX PROTEIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Suzuki N., Kurita M., Yoshino K., Kajiura H., Nomura K., Purification and structure of mosact and its derivatives egg jelly of the saction Clypeaster japonicus."; Zool. Sci. 4:649-656(1987).

1- FUNCTION: STIMULATES SPERM RESPIRATION AND MOTILITY. PIR; JN0025, JN0025.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clypeaster japonicus (Sand dollar).
Eukaryota; Metazoa; Echinodermata; Eleut
Echinoidea; Euechinoidea; Gnathostomata;
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Mitochondrion.
                                                                                                                                                                                                                                                           Solanum tuberosum (Potato).
Eukaryota; Viridiplantae; Embryophyta;
                                                                                                                                                                                                                                                                                                                                                                                  MMPX_SOLTU
P80501;
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01-FEB-1991 (Rel.
[GLN-6]-MOSACT.
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P19962;
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                                                           Plant
                                                             of the protein complexes Plant J. 9:357-368(1996).
                                                                            MEDLINE-97077345; PubMed-8919912;
Jansch L., Kruft V., Schmitz U.K., Braun H.P.;
New insights into the composition, molecular mass
of the protein complexes of plant mitochondria.";
                                                                                                                                                                TISSUE=TUBER;
                                                                                                                                                                                                                      Solanales;
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les; Solanaceae;
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naceae; Solanum.
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1; Mismatches
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Pred. No. 9.66
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AMIDATION (BY SIMILARITY).
284B38D1EEB735A3 CRC64;
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mata; Clypeasteroida;
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S_HALVO
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01-OCT-1996
30-MAY-2000
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P50559;
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                                                         SEQUENCE
                                                                                                                                                                                                                                             Halobacterium volcanii
Archaea; Euryarchaeota;
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30-MAY-2000
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                                         PIR; H33084; H33084
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McDougall J., Witt
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PFAM; PF00281; Ribosomal_L5; 1.
PROSITE; PS00358; RIBOSOMAL_L5;
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2; Conservative
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(Rel. 34, Last sequence update)
(Rel. 39, Last annotation update)
AL PROTEIN L5P (HVOL5) (FRAGMENT).
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C PROTEIN L5P (HMEL
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Best Local Similarity
Matches 2; Conser
 RL5_HALHA
P50556;
01-OCT-1996
01-OCT-1996
30-MAY-2000
                                                                                                                                                                                                                                                                                                                                                     Cortie C., Johnson K.H., Adrian T.E., Westermark P.;
"Islet amyloid polypeptide in the rabbit and European hare: studies on its relationship to amyloidogenesis.";
Diabetologia 36:183-188(1993)
-i- FUNCTION: SELECTIVELY INHIBITS INSULIN-STIMULATED GLUCOSE UTILIZATION AND GLYCOGEN DEPOSITION IN MUSCLE, WHILE NOT AFFECTING ADIPOCYTE GLUCOSE METABOLISM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; P
R1bosomal
NON_TER
SEQUENCE
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                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentities requires a license agreement (See http://www.isb-sib.ch/an
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15-JUL-1998
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                                                                                                                                                                                           SEQUENCE
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Eukaryota; Metazoa; Chordata; C
                                                                                                                                                                                                                                     Hormone;
                                                                                                                                                                                                                                               EMBL; S57802;
                                                                                                                                                                                                                                                                    or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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(Rel. 36, Last sequence update)
(Rel. 36, Last annotation update)
ID POLYPEPTIDE (AMYLIN) (FRAGMENT)
(Rel. 34, Created)
(Rel. 34, Last sequence update)
(Rel. 39, Last annotation update)
                                                                                                                                       Conservative
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2582
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Pred. No. 2.4e
1; Mismatches
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FKB7_PINPS
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Best Local S
Matches 2
INTERPRO: IPRO01179;
INTERPRO: IPRO01179;
PROSITE; PS00453; FKBP_PPIASE_2; PARTIAL.
PROSITE; PS00454; FKBP_PPIASE_3; PARTIAL.
PROSITE; PS50059; FKBP_PPIASE_3; PARTIAL.
PROSITE; PS50059; FKBP_PPIASE_3; PARTIAL.
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SEQUENCE
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P81104;
15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
70 KDA PEPTIDYLPROLYL ISOMERASE (EC 5.2.1.8)
ISOMERASE) (CYCLOPHILIN) (PPINSE) (S1205-06)
                                                                                                                                                                                                                                                                                                                                                              proteins.";
Electrophoresis 20:1098-1108(1999).
-I- FUNCTION: PPIASE THAT BINDS CALMODULIN (BY SIMILARITY).
-I- CATALYTIC ACTIVITY: PEPTIDYLPROLINE (OMEGA-180) -
PEPTIDYLPROLINE (OMEGA-0).
-I- MISCELLANEOUS: ON THE 2D-GEL THE DETERMINED PI OF THIS PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plomion C., Costa P., Bahrman N., Frigerio J.-M.; "Genetic analysis of needle proteins in maritime pine. dominant and codominant protein markers assayed on dip a haploid-based genetic map."; Silvae Genetica 46:161-165(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pinus pinaster (Maritime pine).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Coniferopsida; Coniferales; Pinaceae; Pinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-94229075; PubMed-8174557; McDougall J., Wittmann-Liebold B.; "Comparative analysis of the protein components complexes of halophilic archaebacteria."; Eur. J. Biochem. 221:779-785(1994).
-I- SIMILARITY: BELONGS TO THE L5P FAMILY OF RIB PIR; C33084; C33084.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Halobacterium halobium.
Archaea; Euryarchaeota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-99274088; PubMed-10344291;
Costa P., Pionneau C., Bauw G., Dubos C.,
Frigerio J.-M., Plomion C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PFAM; PF00281; Ribosomal_L5; 1. PROSITE; PS00358; RIBOSOMAL_L5;
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                                                                                                                                                                                                                                                                                          -1 - SIMILARITY: BELONGS TO THE FKBP-TYPE
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15-JUL-1999 (Rel. 38, Last annotation update)
PROBABLE GLUTAMINE SYNTHETASE LEAF ISOZYME (EC 6.3.1.2)
AMMONIA LIGASE) (S2205/S2287) (N47/N48) (FRAGMENT).
Pinus pinaster (Maritime pine).
Pinus pinaster (Maritime pine).
Eukaryota, Viridiplantae, Embryophyta; Tracheophyta; Spe
Coniferopsida; Coniferales; Pinaceae; Pinus.
                                                                                                                                                                                                                                                                                 SEQUENCE
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- FUNCTION: THE LIGHT-MODULATED CHLOROPLAST ENZYME,

- NUCLEAR GENE AND EXPRESSED PRIMARILY IN LEAVES, IS

THE REASSIMILATION OF THE AMMONIA GENERATED BY PHO
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Costa P., Pionneau C., Bauw G., Dubos C., B
Frigerio J.-M., Plomion C.;
"Separation and characterization of needle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE=NEEDLE;
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5.7, ITS MW IS: 42 KDA.
SIMILARITY: BELONGS TO THE GLUTAMINE
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PS00181; GLNA_ATP; PARTIAL
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Pred. No.
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Adema C.M., Hertel L.A., Miller R.D., Loker E.S.;
A family of fibrinogen-related proteins that precipitates derived molecules is produced by an invertebrate after information of the process of the process of the paras:
-i- FUNCTION: BINDS AND PRECIPITATES ANTIGENS OF THE PARAS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biomphalaria glabrata (Bloodfluke planorb).
Eukaryota; Metazoa; Mollusca; Gastropoda; P
Planorbidae; Biomphalaria.
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01-OCT-2000
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KETOISOVALERATE OXIDOREDUCTASE SUBUNIT VORA (EC 1.-.-.) (VOR) (2-
OXOISOVALERATE OXIDOREDUCTASE ALPHA CHAIN) (2-OXOISOVALERATE-
FERREDOXIN OXIDOREDUCTASE ALPHA SUBUNIT) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                               ECHINOSTOMA PARAENSEI.
-1- SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=M-LINE; TISSUE=HEMOLYMPH;
MEDLINE-97385165; PubMed-9238039;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oxidoreductase.
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haeota; Methanobacteriales; Methanobacteriaceae;
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39, Last annotation
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                              Score 20; DB 1;
Pred. No. 2.3e+03;
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Pred. No. 2
                                                                                                                                                                   57489A8F2EEDAA94 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
              Hugo
                                                                                                             01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
S-ADENOSYLMETHIONINE DECARBOXYLASE ALPHA SUBUNIT (EC 4.1.1.50)
                                                                                                                                                                        P34039;
                                                                                                                                                                                                                                                                                                                                                                                  Elongation factor;
NON_TER 1
SEQUENCE 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN-EP 00276;
MEDLINE-92362620; PubMed-1499561;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Thermus aquaticus
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                                            SEQUENCE, AND CHARACTERIZATION
                                                                                                                                                                                                                                                                                                                                                                                                                            INTERPRO; IPRO00795; -.
PROSITE; PS00301; EFACTOR_GTP; PARTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSSP;
                            MEDLINE=94029912; PubMed=8216217;
                                                                                    (ADOMETDC) (FRAGMENT).
Acanthamoeba castellanii (Amoeba)
                                                                        Sukaryota; Acanthamoebidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence of the tufA gene encoding elongation factor EF-Tu from
S-adenosyl-L-methionine decarboxylase of Acanthamoeba castellanii
                                                                                                                                                                                                                                                         σ
                                                                                                                                                                                                                                                                                    8 PONLEEILMHCQ 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUBCELLULAR LOCATION: CYTOPLASMIC. SIMILARITY: BELONGS TO THE GTP-BINDING ELONGATION FACTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . J. Blochem. 207:839-846(1992).
FUNCTION: THIS PROTEIN PROMOTES THE GTP-DEPENDENT TRANSLOCATION
OF THE NASCENT PROTEIN CHAIN FROM THE A-SITE TO THE P-SITE OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                        S29294; S29294.
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                E.R.,
                                                                                                                                                                                                                                                           PRQIQEKLIKGQ 17
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4; Conser
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              Byers T
                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                     STANDARD;
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                                                                      Acanthamoeba.
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Pred.
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RESULT 21
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Matches 3; Conserv
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P81342;
15-JUL-1998 (Rel. 3
15-JUL-1998 (Rel. 3
15-JUL-1998 (Rel. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                Clostridium |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -I- SUBUNIT: HETEROTETRAMER OF TWO ALKING EXPONENTIAL GROWTH.
-I- DEVELOPMENTAL STAGE: EXPRESSED ONLY DURING EXPONENTIAL GROWTH.
-I- INDUCTION: STIMULATED BY PURESSIDE. INHIBITED BY AROMATIC
DIAMIDINES BERENIL, PENTAMIDINE, PROPAMIDINE, HYDROXYSTILBAMIDINE,
BY ETHIDIOM BROWIDE AND METHYLGLYOXAL.
-I- SIMILARITY: BELONGS TO THE ADOMETC FAMILY.
                                                                                     NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
15-JUL-1998 (Rel. 36, Last annotation update)
ELECTRON TRANSFER FLAVOPROTEIN ALPHA-SUBUNIT (ALPHA-ETF) (ELECTRON
TRANSFER FLAVOPROTEIN LARGE SUBUNIT) (ETFLS) (CP 14) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Neff): purification and properties."; Biochem. J. 295:203-209(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (3-AMINOPROPYL)METHYLSULFONIUM SALT + CO(2).

-1- COFACTOR: REQUIRES A PYROVOYL GROUP FOR ITS ACTIVITY.

-1- PATHYAY: DECARBOXYLATION OF S-ADENOSYLMETHIONINE PROVIDE
AMINOPROPYL MOIETY REQUIRED FOR SPERMIDINE AND SPERMINE
                                                                                                                                                                                        OXIDOREDUCTASE (ETF DEHYDROGENASE) (BY SIMILARITY).
-1- COFACTOR: CONTAINS ONE MOLECULE OF FAD PER DIMER (BY SIMILARITY)
-1- SUBUNIT: HETERODIMER OF AN ALPHA AND A BETA SUBUNIT.
                                                                                                                                                                                                                                       "Two-dimensional gel electrophoresis separation and N-terminal "Two-dimensional gel electrophoresis separation and N-terminal sequence analysis of proteins from Clostridium pasteurianum W5."; Electrophoresis 19:802-806(1998).

1: FUNCTION: THE ELECTRON TRANSFER FLAVOPROTEIN SERVES AS A SPECIFIC ELECTRON ACCEPTOR FOR OTHER DEHYDROGENASES. IT TRANSFERS THE ELECTRONS TO THE MAIN RESPIRATORY CHAIN VIA ETF-UBIQUINONE
                                                                                                                                                                                                                                                                                                                                                                                                                                Clostridium
                                                                                                       Electron transport;
                                                                                                                                                                                                                                                                                                                                                                            STRAIN-W5;
                                                                                                                                       PROSITE;
                                                                                                                                                        INTERPRO;
                                                                                                                                                                       -1- SIMILARITY: BELONGS TO THE ETF ALPHA-SUBUNIT / FIXB FAMILY
                                                                                                                                                                                                                                                                                                                                                              MEDLINE-98291870; PubMed-9629918;
                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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les 5; Conservative
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CATALYTIC ACTIVITY: S-ADENOSYLMETHIONINE - (5-DEOXY-5-ADENOSYL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BIOSYNTHESIS FROM PUTRESCINE.
SUBUNIT: HETEROTETRAMER OF TWO ALPHA AND TWO BETA CHAINS
DEVELOPMENTAL STAGE: EXPRESSED ONLY DURING EXPONENTIAL G
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                                                                                                                                       PS00696; ETF_ALPHA; PARTIAL
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irmicutes; Bacillus/Clostridium
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                                                                                     2110
                                                                                                                   Flavoprotein; FAD.
                17.7%;
50.0%;
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45.5%;
                                                                                     MW;
Score 20; DB Pred. No. 2.8e 1; Mismatches
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                                                                                     BB23312B28F4F0D6 CRC64;
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                                     DB 1;
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5;
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                                                                                                                                                                                                                                                                                                                                                                                                                                              group; Clostridiaceae;
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                                     Length 19;
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Conservative

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WVFAEQ WELADQ

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RESULT 23
DFTS_RAT
ID DFTS_RAT
AC P07448;
DT 01-APR-1988 (
DT 01-MAR-1989 (
DT 01-MAR-1989 (
DE DENTINAL FLUI
DE PEPTIDE)
OS Rattus norveg
OC Eukaryota; Me
OC Mammalia; Eut
RN [1]
RX MEDLINE-97131
RX MEDLINE-97131
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Best Local
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                                                                      01-APR-1988 (Rel. 07, Created)
01-APR-1988 (Rel. 07, Last sequence up
01-MAR-1989 (Rel. 10, Last annotation
DENTINAL FLUID TRANSPORT-STIMULATING F
                                        Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                 TISSUE-PAROTID GLAND;
          MEDLINE-87131231;
                                                                                                                                                     10 NLEE 13
| | | | |
| 4 NLEE 7
                                                                                                                                                                                         Local
                                                                                                                                                                                   Similarity 100
4; Conservative
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         PubMed-3815601;
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  Kobayashi M.,
                                                                                                                                                                                   0;
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Pred. No. 2.8
0; Mismatches
                                       Craniata; Ver
Sciurognathi;
                                                                       on update)
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                                                Vertebrata;
 Yamamoto
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                                        Muridae;
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                                       Euteleostomi;
; Murinae; Rattus
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                   RAN_XENLA
P52301;
01-0CT-1996
01-0CT-1996
01-0CT-1996
GTP-BINDING
RAN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "The movement of Acriflavine hydrochloride through molars of rats on a cariogenic and non-cariogenic diet.";

J. South. Calif. Dent. Assoc. 35:151-157(1967).

-i- FUNCTION: THIS PEPTIDE STIMULATES THE TRANSPORT OF DENTINAL FLUID, WHICH IS IMPORTANT FOR THE PREVENTION OF DENTAL CARIES.

PIR; JJ001; DIRT.

Dental caries; Parotid gland; Hormone.
                                                                                                                                                                                                                                                                                      "Identification of photosystem I components from the cyanobacterium, synechococcus vulcanus by N-terminal sequencing."; FEBS Lett. 253:257-263(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LT 24
LSYNVU
                                                                                                                                                                                                                                                                                                                                                                                                      P25937:
01-MAY-1992 (Rel. 22, Created)
01-MAY-1992 (Rel. 22, Last sequence update)
01-JUN-1994 (Rel. 29, Last annotation update)
PHOTOSYSTEM I REACTION CENTRE SUBUNIT XI (F
Xenopus laevis (African clawed Eukaryota; Metazoa; Chordata; (
                                                                                                                                                                                                                                                                 -!- SUBCELLULAR LOCATION: 1
-!- SIMILARITY: BELONGS TO PIR; S05220; S05220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHARACTERIZATION.
MEDLINE-67131708; PubMed-5297832;
Steinman R.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Isolation and amino acid sequence of dentinal stimulating peptide from rat parotid glands."; Chem. Pharm. Bull. 34:3803-3811(1986).
                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                              Photosystem I; F
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ICE 20 AA;
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3; Conserv
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4; Conservative
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(Rel. 34, Last sequence update)
(Rel. 34, Last annotation updat
NUCLEAR PROTEIN RAN (TC4) (FRAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
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AA; 2165 MW; FA164F2B6AF80D5A CRC64;
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Craniata;

Vertebrata;

Euteleostomi;

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Page 9
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Best Local Similarity 50.0
Matches 3; Conservative
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NP_BIND
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SEQUENCE
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TISSUB-OVARY;
TISSUB-OVARY;
MEDLINE-94019818; PubMed-8413630;
MODIE M.S., Blobel G.;
"The GTP-binding protein Ran/TC4 is required for protein import into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae; Xenopodinae; Xenopus.
[1]
                                                                                                                                                                                                                                                                                                    the nucleus.";

Nature 365:661-663(1993).

PRATURE 365:661-663(1993).

TRANSPORT. REQUIRED FOR THE IMPORT OF PROTEIN INTO THE NUCLEUS AND ALSO FOR RNA EXPORT. INVOLVED IN CHROMATIN CONDENSATION AND CONTROL OF CELL CYCLE (BY SIMILARITY).

SUBCELLULAR LOCATION: NUCLEAR.

SUBCELLULAR LOCATION: NUCLEAR.
                                                                                                                                                                                                                                                 INTERPRO; IPR002041; -.

PROSITE; PS01115; RAN; PARTIAL.

GTP-binding; Nuclear protein; Protein transport.
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17 WDTAGQ 22
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2657 MW;
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50.08;
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Pred. No. 3.6e+03; 
1; Mismatches 2; Indels
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result	Score	Query	Length	BO	Ħ	Description
1	33	29.2	18	12	078376	078376 human immun
2	33	29.2	23	œ	Q9MG67	inus
ω	29	25.7	17	Ŋ	Q9TWB9	_
. 4	29	25.7	20	Ŋ	Q9R4W5	
5	29	25.7	20	ω	Q9URC7	
o	29	25.7	. 22	12	Q84254	
7	28	24.8	18	N	Q9R5F6	Q9r5f6 helicobacte
	2,7	23.9	18	N	Q47137	Q47137 escherichia
9	27	23.9	24	10	Q9S883	Q9s883 chlamydomon
10	26	23.0	16	v	Q9TWC0	Q9twc0 acanthamoeb
. 11	26	23.0	18	σ	Q9TRQ2	Q9trq2 bos taurus
12	26	23.0	20	13	Q9PS25	Q9ps25 rana catesb
13	26	23.0	23	N	Q9R313	Q9r313 chlamydia t
14	25	22.1.	16	σ	Q9TRB4	
15	25	22.1	19	N	Q9R4U6	Q9r4u6 lactobacill
16	25	22.1	24	12	Q9PXB7	Q9pxb7 hog cholera
17	25	22.1	25	4	Q9UQB1	Q9uqb1 homo sapien
18	24	21.2	14	11	Q9R1G8	
19	24	21.2	14	12	010234	

RESULT 2 Q9MG67

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
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	chlamydi	Q63076 rattus norv		Q9ucc3 homo sapien	Q56354 paracoccus	Q9uwh2 thermococcu		Q9nfc3 drosophila	Q26159 plasmodium	æ	Q9s8h6 glycine max	Q94373 caenorhabdi	Q16476 homo sapien	Q9kk60 mycobacter1	Q52009 pseudomonas	7	Q9s8y7 raphanus sa	Q9k4x0 planktothri	$\vdash$	sus s	Q9ucgl homo sapien	Q16308 homo sapien	8 mus	Q9uch7 homo sapien	Q30218 homo sapien

## ALIGNMENTS

Оу	Query Best Match	SO	목목목	2 2 3	R R	8	8888		RESULT Q78376 ID Q
8 PONIEEILMHCQ 19          ::  :   PUNTENIILPCK 18	Query Match 29.2%; Score 33; DB 12; Length 18; Best Local Similarity 41.7%; Pred. No. 1.le+02; Matches 5; Conservative 3; Mismatches 4; Indels 0; Gaps 0;	EMBL; M92122; AAA44992.1; -  NON_TER 1 1 1  NON_TER 18 18  SEQUENCE 18 AA; 2000 MW; OB1E4794679E050A CRC64;	Curran J.W., Jaite H.W.; "Molecular epidemiology of HIV transmission in a dental practice."; Science 256:1165-1171(1992).	CU C.Y., Clesielski C.A., Myers G., Bandee C.I., Luo C.C., Korber B.T.M., Mullins J.I., Schochetman G., Berkelman R.L., Economou A.N., Witte J.J., Furman L.J., Satten G.A., MacInnes K.A.,	•	11/ SEQUENCE FROM N.A. Zhang L.Q., Leigh-Brown A.J.; Submitted (APR-1992) to the EMBL/GenBank/DDBJ databases. [2]	Viruses; Retroid viruses; Retroviridae; Lentivirus.  WCBI_TaxID=11676;	01-NOV-1996 (TrEMBLrel. 01, Created) 01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01-NOV-1998 (TrEMBLrel. 08, Last annotation update) VIRAL SAMPLE FUPBR4I (FLORIDA PATIENT B), PARTIAL ENV CDS, V4 REGION	T 1 Q78376 PRELIMINARY; PRT; 18 AA. Q78376:

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PROFILIN-BINDING CORTICAL COMPLEX-18 KDA POLYPEPTIDE.
Acanthamoeba castellanii (Amoeba).
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NCBI_TaxID=5755;
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"Primers designed to amplify a mitochondrial NAD1 ipine (Pinus ponderosa), limber pine (P. flexilis), sylvestris).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
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Coniferopsida; Coniferales;
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"Calcium-dependent secretory vesicle-binding
proteins of Saccharomyces cerevisiae.";
Yeast 7:229-244 (1991).
SEQUENCE 20 AA; 2388 MW; 594377CBC3E72B0D
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MEDLINE-89067912; Pubmed-2848926;
                                                                                                                                            Bovine papillomavirus. Viruses; dsDNA viruses, NCBI_TaxID=10571;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycetes;
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30 KNA MAJOR HEAT SHOCK PROTEIN (FRAGMENT).
Helicobacter pylori (Campylobacter pylori).
Bacteria; Proteobacteria; epsilon subdivision;
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MEDLINE=88289404; PubMed=3041373;
Cam K., Bejar S., Gil D., Bouche J.P.;
"Identification and sequence of gene dicB: translation inhibitor from an in-phase internal start.";
'~'~ acids Res. 16:6327-6338(1988).
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Fiedler H.R., Schmid R., Leu S., Shavit N., Strotmann H. "Isolation of CFOCF1 from Chlamydomonas reinhardtii cwliterminal amino acid sequences of the CFOCF1 subunits.";
FEBS Lett. 377:163-166(1995).
SEQUENCE 24 AA; 2707 MW; SCCAE3310F50FR44 CDCC4.
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ATP SYNTHASE DELTA SUBUNIT (FRAGMENT).
Chlamydomonas reinhardtii.
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EMBL; X07465; CAA30350.1; -.
'SEQUENCE 18 AA; 2114 MW; 28B470E8012EC7A2 CRC64;
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Bejar S., Bouche F., Bouche J.P.;
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"Genetic evidence that DicF, a second division inhibitor the Escherichia coli dicB operon, is probably RNA.";
Mol. Microbiol. 3:991-994(1989).
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Bejar S., Cam K., Bouche J.P.;
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"Control of cell division in Escherichia col
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Nucleic Acids Res. 14:6821-6833(1986).
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1.4e+03;
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Q9PS25;
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Q9TWC0;
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01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2000 (TrEMBLrel. 14, Last annotation update)
P68 KINASE INHIBITOR (FRACMENT).
Bos taurus (Bovine).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pec
Boyidae; Boyinae; Bos.
                                                                                                                                                                                                   MEDLINE-92332534; PubMed-1378438; Lee T.G., Tomita J., Hovanessian A.G., Katze M.G.; Lee T.G., Tomita J., Hovanessian A.G., Katze M.G.; "Characterization and regulation of the 58,000-dalton cellular inhibitor of the interferon induced, dsRNA-activated protein kid. Chem. 267:14238-14243(1992).

SEQUENCE 18 AA; 2206 MW; 91778DDE6B34082D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Acanthamoeba castellanii (Amoeba).
Eukaryota; Acanthamoebidae; Acanthamoeba.
NCBI_TaxID=5755;
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01-JUN-2000
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AA; 2115 MW; A64E248880BA06C4
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Last annotation update)
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                      Created)
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Pred. No. 1.3e+03;
1; Mismatches 4
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Matches 5; Conserv
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01-MAY-2000 (TREMBLrel. 13, La
01-JUN-2000 (TREMBLrel 14, La
01-JUN-2000 (TREMBLrel 14, La
ATP-DEPENDENT_20 S PROTEASOME
BOS taurus (BÖvine).
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Bacteria; Chlamydiales; Chlamydiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rubenstein D.S., Thogersen I.B., Pizzo S.V., Enghild J.J.;
"Identification of monomeric alpha-macroglobulin proteinase inhibitors
in birds, reptiles, amphibians and mammals, and purification and
characterization of a monomeric alpha-macroglobulin proteinase
inhibitor from the American bullfrog Rana catesbeiana.";
Biochem. J. 290:85-95(1993).
SEQUENCE 20 AA; 2332 MW; 7CE78C52053F74D7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MONOMERIC ALPHA-MACROGLOBULIN PROTEINASE INHIBITOR Rana catesbelana (Bull frog).
Rana catesbelana (Bull frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; NCBI_TaxID=8400;
                    Eukaryota; Metazoa;
Mammalia; Butheria;
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"Gene identification
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Batrachia; Anura; Neobatrachia; Ranoidea;
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23 AA; 2475 MW;
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  Bos.
                       Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                    Cetartiodactyla;
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DeMartino G. N., Moomaw C.R., Zagnitko O.P., Proske R.J., Ch
Afendis S.J., Swaffield J.C., Slaughter C.A.;
"PA700, an ATP-dependent activator of the 20 S proteasome,
ATPase containing multiple members of a nucleotide-binding
family.",
J. Biol. Chem. 269:20878-20884(1994).
SEQUENCE 16 AA; 1878 MW; F70F74211EE26EDE CRC64;
MEDLINE-93267778; PubMed-8388499;
Rumenapf T., Unger G., Strauss J.H., Thiel H.J.;
"Processing of the envelope glycoproteins of pestiviruses.";
J. Virol. 67:3288-3294(1993).
SEQUENCE 24 AA; 2752 MW; A48D322C89550658 CRC64;
                                                                                                                           01-MAY-2000 (TIEMBLIEL 13,
01-MAY-2000 (TIEMBLIEL 13,
01-MAY-2000 (TIEMBLIEL 13,
GLYCOPROTEIN EO (FRAGMENT).
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
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BACTERIOCIN LACTACIN B INDUCER (FRAGMENT).
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                                                          SEQUENCE
                                                                                NCBI_TaxID=11096;
                                                                                           Pestivirus
                                                                                                    Viruses; ssRNA positive-strand
                                                                                                                Hog cholera virus
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EMBL; AB013005; BAA36574.1; -
NON_TER 25 25
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SEQUENCE 25 AA; 2969 MW; 35494
                                                                                                                     Thu Y., Tam J.W.O.;
"Partial sequence of rat is submitted (NOV-1998) to the EMBL; AF110222; AAD40897.1
EMBL; AF110221; AAD40897.1
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Eukaryota; Metazoa; Chordata;
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Sciurognathi; Muridae;
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Query Match Best Local Similarity

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RESULT
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REPLIANCE FOR SEQUENCE FOR SE
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SEQUENCE
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Q30218;
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MEDLINE-98216723; PubMed-9557645;
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                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Envelope protein. NON_TER 1
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EMBL: U89854; AAC25093.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human immunodeficiency virus type 1. Viruses; Retroid viruses; Retroviridae; NCBI_TaxID=11676;
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DB 7;
2.9e+03;
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Q9UCH7;
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SEQUENCE
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                                                                                                                           Chambers G.W., McKenzie I.F.C., Hogarth P.M.;
"The murine Fc receptor for immunoglobulis: purification, partial amino acid sequence, and isolation of cDNA clones.";
proc. Natl. Acad. Sci. U.S.A. 83:6980-6984(1986).
EMBL; M14277; AAA37606.1;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

NCBI_TaxID=9606;
                                                                                                                                                                                                           SEQUENCE OF 226-248 FROM N.A. MEDLINE-86313694; PubMed-2944118;
                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
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                                                                                                                MGD;
                                                                                                                                                                                                 Hibbs M.L., Walker I.D., Kirszbaum L.,
                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
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21 AA;
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31.2%;
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                                                                       13303A118E855AA6 CRC64;
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Pred. No. 3.6e+03;
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29F2DD83C77FFCE2 CRC64;
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Best Local Similarity 53.0
Thes 7; Conservative
  Q9TUP6;
Q9TUP6;
01-MAY-2000
01-MAY-2000
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01-NOV-1996
01-NOV-1996
01-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    O9UCG1;
01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2000 (TrEMBLrel. 14, Last annotation update)
PEPTIDYL-ALPHA-HYDROXYGLYCINE ALPHA-AMIDATING LYASE
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NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE.

Husten E.J., Tausk F.A., Keutmann H.T., Elpper B.A.;

J. Blol. Chem. 268:9709-9717(1993).

SEQUENCE 24 AA; 2830 MW; 854634033B13A147 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequencing.";
Vox Sang. 68:121-129(1995).
EMBL; S77082; AAB34408.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE=95282423; PubMed=7762218;
Dupont B.R., Grant S.G., Oto S.H., Bigbee W.L., Jensen R.H.,
Langlois R.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q16308
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Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Molecular characterization of glycophorin A transcripts in human erythroid cells using RT-PCR, allele-specific restriction, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLYCOPHORIN A (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9606;
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15 EVAMHTST 22
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Last sequence update)
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Pred. No. 4.3e
1; Mismatches
                                                                                                                                                                                                                                                                                            Score 23.5; DB 4;
Pred. No. 4.9e+03;
1; Mismatches 4;
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4.3e+03;
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Query Match
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NON_TER 24 24
SEQUENCE 24 AA; 2782 MW
                                                                                                                                                                                                                                                                                 01-OCT-2000 (TIEMBLIEL. 15, Last annotation update)
HEART FATTY ACID BINDING PROTEIN (FRAGMENT).
Sus scrofa (P19).
                                                                                                                                                                    STRAIN-PIETRAIN; TISSUE-BLOOD;
Nechtelberger D., Mueller S., Mueller M.;
Submitted (JUL-1999) to the EMBL/GenBank/DDBJ
EMBL; AF164968; AAD47821.1; -.
HSSP; P05413; 1HMT.
                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                        NCBI_TaxID-9823;
[1]
                                                                                                                                               INTERPRO; IPR000463; -.
 9 WKLVDS-KNFDDYM 21
                      2 WELADQPQNLEEIL 15
                                             Conservative
                                                                                                                                   lipocalin; 1.
                                                                                                    2782 MW;
                                                                                                                                                                                                                                                             Chordata; Craniata; Vertebrata; Cetartiodactyla; Suina; Suidae;
                                                       20.8%;
                                             ū
                                                       Score
Pred.
                                                                                                    C75339989DDC2043 CRC64;
                                             Mismatches
                                                       23.5; DB 6;
No. 4.9e+03;
                                                                                                                                                                                             databases
                                                                   Length 24;
                                             Indels
                                                                                                                                                                                                                                                                Euteleostomí;
Sus.
                                             ۲,
                                             Gaps
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Search completed: February 5, 2001, 10:55:24
Job time: 913 sec

GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.

OM protein - protein search, using sw model

Run on:

US-08-981-824-4 108 score: Title: Perfect :

1 TLKYAIKTGHPRYFNQLSTG 20 Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

195891 segs, 67900655 residues Searched:

5001 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 25

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

PIR\_66:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

																													••	
	Description	hypothetical prote	penicillin-binding	Ig heavy chain CRD	metalloendopeptida	gene HEXA protein	penicillin-binding	alpha-amylase inhi	Ig heavy chain V r	protein kinase C 1	carboxypeptidase 3	Ig heavy chain V r	Ig heavy chain CRD	gene HEXA protein	T-cell receptor be	urinary tract ston	hypothetical prote	allatostatin - tob	급	hypothetical prote	T-cell receptor J-	T-cell receptor J-	N4-(beta-N-acetylg	T-cell receptor al	celF protein - Esc		antigen	T-cell receptor be		ribosomal protein
SUMMARIES	ΙD	H64710	A54548	PT0256	2021	I64828	B54548	S48156	PH1728	S10807	B44923	PH1733	PT0302	164829	PH1464	H56046	B41868	A61612	PH1304	S58382	S47198	S47212	S04228	PH1907	S42587	S47365	S47372	E49255	PT0234	S78759
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	Length	25	24	13	20	25	25	23	23	16	17	25	11	12	. 12	13	15	15	19	20	21	21	22	25	11	13	13	16	17	20
ď	Query Match	27.8	26.9	25.9	25.9	25.9	25.9	25.0	24.1	23.1	23.1	23.1	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	21.3	21.3	21.3	21.3	21.3	21.3
	Score	30	29	28	28	28	28	27	26	25	25	25	24	24	24	, 24	24	24	24	24	24.	24	24	24	23	23	23	23	23	23
	Result No.	1	7	m	4	ഹ	ø	7	ω	σ	10	11	12	13	14	12	16	17	. 18	19	20	21	22		24			27	28	29

gene CTLA-1 protei	opacity protein P.	antimicrobial pept	binR protein - Sta	T-cell antigen rec	T-cell receptor be	carboxypeptidase B	Ig heavy chain DJ	casein kinase II (	protein kinase - h	Ig heavy chain DJ	coenzyme F420 hydr	acidic fibroblast	hypothetical prote	collagen alpha 2(X	carbon-monoxide de	-
149414	B60119	A41037	S34447	S47389	PH1479	A26212	PH1342	A45133	137452	PH1307	563485	S03954	T07991	156978	PL0140	
7	~	~	7	7	N	~	~	7	~	~	7	~	~	~	~	
21	21	24	12	13	13	15	15	16	16	19	19	70	24	25	4	
21.3	21.3	21.3	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	19.4	
23	53	23	22	22	22	22	22	22	22	22	22	22	22	22	21	
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	4.5	

## ALIGNMENTS

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pylori (s
Helicobacter py
•
HP1528
protein.
othetical

RESULT 1
H464710
Hypothetical protein HP1528 - Helicobacter pylor1 (strain 26695)
C;Species: Helicobacter pylori
C;Species: Helicobacter pylori
C;Date: 09-Aug-1997 #sequence\_revision 09-Aug-1997 #text\_change 08-Oct-1999
C;Accession: H64710
C;Acce

Gaps ö Length 25; 6; Indels Query Match 27.8%; Score 30; DB 2; Best Local Similarity 37.5%; Pred. No. 2e+02; Matches 6; Conservative 4; Mismatches

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2 LKYAIKTGHPRYFNOL 17 ð

10 LDYSLKKGLVKVINRL 25 g

RESULT 2 A54548 penicillin-binding protein 4 - Enterococcus hirae (fragment)

C; Species: Entercoccus hirae
C;Date: 06-0ct-1994 #sequence\_revision 18-Nov-1994 #text\_change 04-Dec-1994
C;Accession: A54548
R;Jacques, P.; el Kharroubi, A.; Van Beeumen, J.; Piras, G.; Coyette, J.; Ghuysen, J.
FEMS Microbiol. Lett. 66, 119-123, 1991
A;Title: Mode of membrane insertion and sequence of a 32-amino acid peptide stretch o A;Accession: A54548
A;Reference number: A54548
A;Reference number: A54548
A;Reference number: A54548
A;Reference number: A54548
A;Molecule type: protein
A;Molecule type: protein
A;Molecule cype: protein
A;Molecule cype: acid from NCBI backbone (NCBIP:63855)

Gaps ö 26.9%; Score 29; DB 2; Length 24; 40.0%; Pred. No. 2.8e+02; Live 2; Mismatches 10; Indels Conservative Query Match Best Local Similarity Matches 8; Conserv

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1 TLKYAIKTGHPRYFNQLSTG 20

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Length 25;

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Score 28; DB 2; 1
Pred. No. 4.3e+02;
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A;Molecule type: protein
A;Residues: 1-23 <GAR>
C;Superfamily: wheat alpha-amylase inhibitor
C;Keywords: alpha-amylase inhibitor
    C; Superfamily: beta-hexosaminidase
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50.0%;
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ilarity 80.0%;
Conservative
                                                                     Query Match 25.9
Best Local Similarity 50.0
Matches 5; Conservative
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Best Local Similarity 50.0
Matches 6; Conservative
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A;Molecule type: protein
A;Residues: 1-25 <JAC>
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C;Date: 29-May-1998 #sequence_revision 29-May-1998 #text_change 21-Jul-2000
C;Date: 29-May-1998 #sequence_revision 29-May-1998 #text_change 21-Jul-2000
C;Accession: I64828
R;Boles, D.J.; Proia, R.L.
Am. J. Hum. Genet. 56, 716-724, 1995
A;Title: The molecular basis of HEXA mRNA deficiency caused by the most common Tay-Sachs
A;Reference number: I51882; MUID:95193801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pg0215
metalloendopeptidase (EC 3.4.24..) - Streptomyces griseus (fragment)
C;Species 21 - Streptomyces griseus
C;Decies 31 - Dec-1991 #sequence_revision 31 - Dec-1991 #text_change 28 - May-1993
C;Accession: PQ0215
R;Tsuyuki, H; Rajiwara K.; Fujita, A.; Kumazaki, T.; Ishii, S.
A;Title: Purification and characterization of Streptomyces griseus metalloendopeptidases
A;Reference number: PQ0215; MUID:92121147
                                                                                                                               C. Species: Homo sapiens (man)
C. Species: Homo sapiens (man)
C. Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 16-Aug-1996
C. Accession: PT0256
R. Yamada, M.; Wasserman, R.; Reichard, B.A.; Shane, S.; Caton, A.J.; Rovera, G. J. Exp. Med. 173, 395-407, 1991
J. Exp. Med. 173, 395-407, 1991
A. Aritile: Preference number: PT0222; MUID:91108337
A. Reference number: PT0222; MUID:91108337
A. Reference number: DNA
A. Residues: 1-13 < YAM>
A. Residues: 1-13 < YAM>
A. Experimental source: B lymphocyte
C. Keywords: heterotetramer; immunoglobulin
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A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-25 <RES>
A;Cross-references: GB:S76982; NID:g912780; PIDN:AAD14242.1; PID:g4261942
C;Genetics:
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Pred. No. 3.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4; Indels
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                                                                                                                    heavy chain CRD3 region (clone 2-115C) - human (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 28; DB 2; 1
Pred. No. 2.1e+02;
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A;Cross-references: GDB:120040; OMIM:272800
A;Map position: 15q23-15q24
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A;Molecule type: protein
A;Residues: 1-20 <TSUS
C;Reywords: hydrolase; metalloproteinase
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38.5%;
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50.0%;
      2 TLTLTIQTSXPRGMIYDNTG
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Best Local Similarity 50.0
Matches 6; Conservative
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Best Local Similarity
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C;Species: Enterococous hirae
C;Date: 06-Oct-1994 #sequence_revision 18-Nov-1994 #text_change 04-Dec-1994
C;Accession: B54548
R;Jacques, P.; el Kharroubi, A.; Van Beeumen, J.; Piras, G.; Coyette, J.; Ghuysen, J.
FEMS Microbiol. Lett. 66, 119-123, 1991
A;Title: Mode of membrane insertion and sequence of a 32-amino acid peptide stretch o
A;Reference number: A54548; MUID:92038914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C, Accession: S48156
R; Garcia-Casado, G.; Sanchez-Monge, R.; Lopez-Otin, C.; Salcedo, G.
Eur. J. Blochem. 224, 525-531, 1994
A; Title: Rye inhibitors of animal alpha-amylases show different specifities, aggregat A; Accession: 548156; MUID: 95010030
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C;Species: Mus musculus (house mouse)
C;Date: 24 Feb-1994 #sequence_revision 24-Feb-1994 #text_change 17-Mar-1999
C;Accession: PHI728
C;Accession: PHI78, 205-307, McLean, M.J.; Lalor, P.A.; Nossal, G.J.V.
J. Exp. Med. 178, 295-307, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 alpha-amylase inhibitor - rye
C;Species: Secale cereale (rye)
C;Date: 07-May-1995 #sequence_revision 03-Nov-1995 #text_change 17-Mar-1999
   Gaps
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Pred. No. 4.3e+02;
L; Mismatches 5; Indels
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5.7e+02;
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Pred. No. 5.7e+
0; Mismatches
2; Mismatches
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Gree HEXA protein - human (fragment)
C.Species: Homo sapiens (man)
C.Species: Homo sapiens (man)
C.Species: 19-May-1998 #sequence_revision 29-May-1998 #text_change 21-Jul-2000
C.Accession: 164839
R.Boles, D.J.; Proia, R.L.
Am. J. Hum. Genet: 56, 716-724, 1995
Am. J. Hum. Genet: 56, 716-724, 1995
A.A.Reference number: 151882; MUID:95193801
A.Reference number: 151882; MUID:95193801
A.Reference number: 151823
A.Reference numb
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Cispecies: Homo sapiens
Cispecies: Managa, M.; Wasserman, R.; Reichard, B.A.; Shane, S.; Caton, A.J.; Rovera, G. J. Exp. Med. 173, 395-407, 1991
Airitle: Preferential utilization of specific immunoglobulin heavy chain diversity Aireference number: PT0222; MUID:91108337
                                                                                           Ig heavy chain V region (clone GCC-13) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Acte: 24-Eb-1994 #sequence_revision 24-Feb-1994 #text_change 17-Mar-1999
C;Accession: PH1733
R;McHeyzer-Williams, M.G.; McLean, M.J.; Lalor, P.A.; Nossal, G.J.V.
J. Exp. Med. 178, 295-307, 1993
A;Title: Antigen-driven B cell differentiation in vivo.
A;Reference number: PH1675; MUID:93301607
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C;Genetics:
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A; Residues: 1.25 < AKCH>
A; Residues: 1.25 < AKCH>
A; Residues: 1.25 < AKCH>
A; Apperimental source: B cell
A; Note: the authors translated the codon ACA for residue 13 as Ala
C; Superfamily: immunoglobulin V region; immunoglobulin homology
C; Keywords: heterotetramer; immunoglobulin
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Pred. No. 1.3e+03;
5; Mismatches 2;
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A; Résidues: 1-11 < YAM>
A; Résidues: 1-30 urce: B lymphocyte
C; Reywords: heterotetramer: immunoglobulin
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30.0%;
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Best Local Similarity 30.0
Matches 3; Conservative
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Best Local Similarity
Matches 4; Conserv
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10 SVETRYPYY 19
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N'Alternate names: probable lipocortin

S'Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)

C'Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)

C'Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)

C'Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)

C'Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)

R'Toker, A.; Ellis, C.A.; Sellers, L.A.; Aitken, A.

Bur. J. Blochem. 191, 421-429, 1990

A'Title: Protein kinase C inhibitor proteins. Purification from sheep brain and sequence

A'Reference number: $10804; MUID: 90345949

A'Reference aries aries

A'Residunce aries aries

A'Residunce 
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C.Species: Rhizomucor circinelloides f. lusitanicus
C.Species: Rhizomucor circinelloides f. lusitanicus
C.Species: Bhizomucor circinelloides f. lusitanicus
C.Saccession: B44923
R.Solsonto, M.E.; Li, Q.H.; Logan, D.A.
R.DiSanto, M.E.; Li, 4474,455, 1924
A.Title: Purification and characterization of a developmentally regulated carboxypeptida
A.Reference number: A44923; MUID:92105011
A; Title: Antigen-driven B cell differentiation in vivo.
A; Reference number: PH1675; MUID:93301607
A; Accession: PH1736
A; Accession: PH1736
A; Accession: PH1736
A; Residues: 1-23 < MCH>
A; Experimental source: B cell
A; Note: the authors translated the codon TTA for residue 11 as Phe and ATA for residue
C; Superfamily: immunoglobulin V region; immunoglobulin homology
C; Keywords: heterotetramer; immunoglobulin
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A;Residues: 1-17 <DIS>
A;Note: sequence extracted from NCBI backbone (NCBIP:75616)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24.1%; Score 26; DB 2; Le. Ilarity 33.3%; Pred. No. 8.2e+02; Conservative 3; Mismatches 7;
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Pred. No. 8.6e+02;
1; Mismatches 3;
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50.0%;
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35.7%;
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Best Local Similarity 50.09
Matches 4; Conservative
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8 TKSLEIRGNYPYYFD 22
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1 KGDYYRYLAEFATG 14
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Best Local Similarity
Matches 5; Conservi
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Matches 5; Conserv
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A; Status: preliminary
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A;Cross-references: GDB:120040; OMIM:272800 A;Map position: 15q23-15q24

A; Gene: GDB: HEXA

9 TGHEEFSN 16

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NCBIP:99906)

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A,Title: Nucleotide sequence of the sex pheromone inhibitor (iAD1) determinant of Ent A, Reference number: A37391; MUID:91261999
                                                               A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-15 < PON>
A; Residues: sequence extracted from NCBI backbone (NCBIN:99901, R; Clowell, DB.; Pontius, L.T.; An, F.Y.; Ike, Y.; Suzuki, Plasmid 24, 156-161, 1990
number: A41868; MUID:92250408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2;
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66.7%;
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llarity 36.4%;
Conservative
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Best Local Similarity
Matches 4; Conserv
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Best Local Similarity
Matches 4; Conserv
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8 YFNPIS 13
                                               ; Accession: B41868
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                                                                                                                                                                                                                                                                                                                                                                             A; Genome: plasmid
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C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 11-Apr-1995
C;Accession: PH164
S;Casanova, J.L.; Martinon, F.; Gournier, H.; Barra, C.; Pannetier, C.; Regnault, A.; Kc
J. Exp. Mac. 177, 81-820, 1993
A;Title: T cell receptor selection by and recognition of two class I major histocompatib
A;Reference number: PH1430; MUID:93171821
A;Residues: 1-12 <CAS>
A;Residues: 1-12 <CAS>
A;Experimental source: cytolytic T-lymphocyte
C;Superfamily: immunoglobulin homology
C;Reywords: receptor; T-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B41868
hypothetical protein (traEl 3' region) - Enterococcus faecalis plasmid pAD1
c; Species: Enterococcus faecalis
C; Date: 04-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 15-Oct-1999
C; Accession: B41868; B37391
R; Pontius, L.T.; Clewell, D.B.
J. Bacteriol. 174, 3152-3160; 1992
A; Title: Conjugative transfer of Enterococcus faecalis plasmid pAD1: nucleotide sequence
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C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Sate: 12-Apr-1995 #sequence_revision 12-Apr-1995 #text_change 12-Apr-1995
C;Accession: H56046
R;Binette, J.P.; Binette, M.B.; Gawinowicz, M.A.; Kendrick, N.
Submitted to the Protein Sequence Database, February 1995
A;Description: Isolation, characterization and sequence of stone proteins.
A;Reference number: A56046
A;Reference number: A56046
A;Reference pretainary
A;Accession: H56046
A;Reference protein
A;Residues: 1-13 < BIN>
                                                                                                               Gaps
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                                                                 Score 24; DB 2; Length 12;
Pred. No. 8.7e+02;
2; Mismatches 2; Indels
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Pred. No. 9.4e+02;
!; Mismatches 1; Indels
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Pred. No. 8.7e+02;
1; Mismatches 4
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    C; Superfamily: beta-hexosaminidase
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66.78;
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50.0%;
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50.0%;
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Best Local Similarity 50.00,
Local 4; Conservative
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Best Local Similarity 50...
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Best Local Similarity
Matches 4; Conserv
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R;Kramer, S.J.; Toschi, A.; Miller, C.A.; Kataoka, H.; Quistad, G.B.; Li, J.P.; Carne Proc. Natl. Acad. Sci. U.S.A. 88, 9458-9462, 1991
A;Title: Identification of an allatostatin from the tobacco hornworm Manduca sexta.
A;Reference number: A61612; MUID:92052112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Species: Homo sapiens (man)
C; Species: Homo sapiens (man)
C; Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 07-May-1999
C; Accession: PH1304
R; Wasserman, R.; Galill, N.; Ito, Y.; Reichard, B.A.; Shane, S.; Rovera, G.
J. Exp. Med. 176, 1877-1881, 1992
J. Exp. Med. 176, 1877-1881, 1992
A; Title: Predominance of fetal type DJH joining in young children with B precursor ly A; Reference number: PH1302; MUID:93094761
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C;Date: 21-Jul-1995 #sequence_revision 21-Jul-1995 #text_change 11-Jul-1997
C;Accession: A61612
                                                                                                                                                                                                                                                                                               Gaps
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A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-15 < KRA>
C; Keywords: neuropeptide; pyroglutamic acid
E; 1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
A;Molecule type: DNA_
A;Residues: 1-15 <CLE>
A;Cross-references: GB:M62888; NID:g141853; PIDN:AAA98040.1; PID:g141855
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A;Residues: 1-19 <NAS>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
                                                                                                                                                                                                                             Length 15;
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PH1304
Ig heavy chain DJ region (clone C439-111) - human (fragment)
                                                                                                                                                                                                                             Score 24; DB 2; Le
Pred. No. 1.1e+03;
2; Mismatches 5;
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Pred. No. 1.1e+03;
1; Mismatches 1;
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T-cell receptor alpha chain (clone A21) - human (fragment)
C; Species: Homo sapiens (man)
C; Species: Homo sapiens (man)
C; Species: Homo sapiens (man)
C; Species: 10 Mar-1994 #sequence_revision 28-Oct-1994 #text_change 17-Mar-1999
C; Accession: PH1907
R; Sensi, M.; Salvi, S.; Castelli, C.; Maccalli, C.; Mazzocchi, A.; Mortarini, R.; Nic J. Exp. Med. 178, 1231-1246, 1993
A; Title: T cell receptor (TCR) structure of autologous melanoma-reactive cytotoxic T HLA-A2-restricted and melanocyte-lineage-specific CTL clone.
A; Reference number: PH1907; MUID:93389388
                                                                                                                                                                                                                                                                                                                     RESULT 22

S04228

S04228

N4-(beta-N-acetylglucosaminyl)-L-asparaginase (EC 3.5.1.26) 20K chain - rat (fragment

N;Alternate names: glycosylasparaginase

C;Specias: Rattus norvegicus (Norway rat)

C;Date: 28-Feb-1990 #sequence_revision 28-Feb-1990 #text_change 28-Apr-1993

C;Accession: S04228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Tollersrud, O.K.; Aronson Jr., N.N.
B;tochem. J. 260, 101-108, 1989
A;Title: Purification and characterization of rat liver glycosylasparaginase.
A;Reference number: S04228; MUID:89374025
A;Recession: S04228
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C;Species: Escherichia coli
C;Date: 25-Dec-1994 #sequence_revision 10-Nov-1995 #text_change 10-Nov-1995
  A;Residues: 1-21 <PLA>
A;Cross-references: EMBL:X71043; NID:9506512; PIDN:CAA50360.1; PID:9510316
C;Reywords: T-cell receptor
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                                                                                                                 Length 21;
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Best Local Similarity 100.0%; Pred. No. 1.6e+03;
Matches 4; Conservative 0; Mismatches 0;
                                                                                                                 Score 24; DB 2; 1
Pred. No. 1.6e+03;
0; Mismatches 4;
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Pred. No. 1.9e+03;
0; Mismatches 4;
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A; Residues: 1-25 <SEN>
A; Cross-references: EMBL:X74392
A; Experimental source: lymphocyte
C; Keywords: receptor
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                                                                                                                 Query Match
22.2%;
Best Local Similarity 55.6%;
Matches 5; Conservative
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Matches 5; Conservative
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A; Residues: 1-22 <TOL>
C; Keywords: hydrolase
                                                                                                                                                                                                                                                   6 TYKYIFGTG 14
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9 KTGH 12
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S42587
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                                                                                                                                                                                                                                              hypothetical protein 1 - human
C;Species: Homo sapiens (man)
C;Date: 12-Feb-1998 #sequence_revision 20-Feb-1998 #text_change 08-Oct-1999
C;Accession: S58382
R;Dirks, R.P.H.; Onnekink, C.; Jansen, H.J.; de Jong, A.; Bloemers, H.P.J.
Artille: A novel human c-sis mRNA species is transcribed from a promoter in c-sis intron A;Reference number: S58382; MUID:95388493
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C:Date: 06-Feb-1995 #sequence_revision 06-Feb-1995 #text_change 05-Nov-1999
C:Accession: S47198
R:Plaza, A.; Kono, D.H.; Theofilopoulos, A.N.
submitted to the EMBL Data Library, February 1993
A:Reference number: S40133
A:Reference number: S40198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C:Species: Homo sapiens (man)
C:Date: 06-Feb-1995 #sequence_revision 06-Feb-1995 #text_change 05-Nov-1999
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A;Molecule type: mRNA
A;Residues: 1-21 APLA>
A;Cross-references: EMBE:X71041; NID:9507005; PIDN:CAA50358.1; PID:9510655
C;Keywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Molecule type: mRNĀ
A;Residues: 1-20 <DIR>
A;Cross-references: EMBL:X83705; NID:9951023; PIDN:CAA58678.1; PID:9951024
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Pred. No. 1.5e+03;
  Length 19;
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Score 24; DB 2; Le
Pred. No. 1.4e+03;
3; Mismatches 1;
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Pred. No. 1.6e+03;
0; Mismatches 4;
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submitted to the EMBL Data Library, February 1993
A;Reference number: $40133
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  22.2%;
42.9%;
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Query Match 22.2
Best Local Similarity 42.9
Matches 3; Conservative
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Best Local Similarity 46.2
Matches 6; Conservative
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A; Status: preliminary
A; Molecule type: mRNA
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1 SGYPYYY 7
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R; Plaza, A.; Kono, I
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Search completed: February 5, 2001, 10:49:30 Job time: 743 sec

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C;Accession: S42587
R;Guzzo, A.; DuBow, M.S.
Mol. Gen. Genet. 242, 455-460, 1994
Mol. Gen. Genet. 242, 455-460, 1994
A;Title: A luxAB transcriptional fusion to the cryptic celf gene of Escherichia coll dis A;Reference number: S42587; MUID:94166755
A;Accession: S42587
A;Molecule type: DNA
A;Residues: 1-11 <GUZ>
C;Genetics: A;Gene: celf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cross-references: EMBL:235690; NID:g527471; PIDN:CAA84759.1; PID:g527472; EMBL:235679;
Accession: S47375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Lehner, P.J.
submitted to the EMBL Data Library, August 1994
A:Description: Human HLA-A0201 restricted recognition of influenza A is dominated by T
A;Reference number: S47355
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Accession: S47397
Status: preliminary
Molecule type: mRNA
Residues: 113 <LE5>
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Accession: S47379
Status: preliminary
Molecule type: mRNA
Residues: 113 <LE3>
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Accession: S47398
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Accession: S47396
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C;Keywords: T-cell receptor
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/Status: preliminary
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//Residues: 1-13 <LEH>
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A; Molecule type: mRNA
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re greater than or equal to the score of the result being
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PKI2_SOLTU
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CYCH_MOUSE
MLB_SCUCH
HBB2_UROHA
DCMS_PSECA
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LSKP_PERAM
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ALLS_MANSE
OXYF_SCYCA
FOR1_MYRGU
PPBH_PSEAE
CSPS_STRIR
PGQ_XENLA
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Bombesin family; Amidation.
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P807704;

01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
ALDEHYDE DEHYDROGENASE, BETA CHAIN (EC 1.2.99.3) (ALDH) (FRAGMENT).
COMMANDAS testosteroni (Pseudomonas testosteroni).
Bacteria; Proteobacteria; beta subdivision; Comamonadaceae; Comamona
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Rana rugosa (Frog).
Eukaryota; Metazoa; Cl
Amphibia; Batrachia; i
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Luykx D.M.A.M., Kim S.W., de Vries S.,
Submitted (UTL-1996) to the SWISS-PROT
-!- CATALYTIC ACTIVITY: AN ALDEHYDE + F
REDUCED ACCEPTOR.
-!- COFACTOR: MOLYBDENUM.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Erspamer V., Erspamer G.F., Mazzanti G., Endean R.; Comp. Biochem. Physiol. 77C:99-108(1984).
-1- SIMILARITY: BELONGS TO THE BOMBESIN/NEUROMEDIN
                                                                                                                          SEQUENCE.
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MEDLINE-84131098; PubMed-6141890;
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RL18_HALSA
RL18_HALSA
RL18_HALVO
LITR_PHYRO
ANGI_BOTJA
RANC_RANPI
RR2_CONAM
TKN3_PSEGU
LPF2_ECOLI
FGF1_CANFA
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01-NOV-1995
01-NOV-1995
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Oxidoreductase; |

NON_TER 19

SEQUENCE 19 AA
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SEQUENCE
                                                                                               MEDLINE=95062247; Pu
Chauvet J., Rouille
                                                                                                                                                                                                                                                  Scyliorhinus canicula (Spotted
Eukaryota; Metazoa; Chordata;
Elasmobranchii, Galeomorphii;
Scyliorhinidae; Scyliorhinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SCYCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALLATOSTATIN (MAS-AS).

Manduca sexta (Tobacco hawkmoth) (Tobacco hornworm).

Bukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;

Bukaryota; Neoptera; Endopterygota; Lepidoptera; Glossata; Di

Sphingiodea; Sphingidae; Sphinginae; Manduca.
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01-NOV-1995 (Rel. 32, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P42559;
01-NOV-1995
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MEDLINE=95062247; PubMed=7972045;
Chauvet J., Rouille Y., Chauveau C., Ch
"Special evolution of neurohypophysial
fishes: asvatocin and phasvatocin, two
isolated from the spotted dogfish (Scyl
                                                                                                                                                                                                                                                                                                                                                                                   PHASVATOCIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Proc.
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Kramer S.J., Toschi
                                                                                                                                                             TISSUE-PITUITARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Neuropeptide.
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                                                                                                                                                                                                 SEQUENCE
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Kramer S.J., Toschi A., Miller C.A., Kat
Li J.P., Carney R.L., Schooley D.A.;
Tidentification of an allatostatin from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match
Local
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FUNCTION: STRONGLY INHIBITS JUVENILE HORMORE BIOSYNTHESIS
BY THE CORPORA ALLATA FROM FIFTH-STADIUM LARVAE AND ADULT
SIMILARITY: BELONGS TO THE ALLATOSTATIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCYCA
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                                                                                                                                                                                                                                                                                                                                                                                                          (Rel. 32, Created)
(Rel. 32, Last seq
(Rel. 32, Last ann
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66
                                                                                                                                                                                                                                                                                (Spotted dogfish) (hordata; Craniata; Vmorphii; Galeoidea;
                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₩;
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Pred. No. 4.7e
1; Mismatches
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Pred.
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Chauvet M.-T., Acher R.;
Salal hormones in cartilaginous
two oxytocin-like peptides
(Scyliorhinus caniculus).";
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4.2e+02,
                                                                                                                                                                                                                                                                                   (Spotted catshark).
Vertebrata; Chondrichthyes;
; Carcharhiniformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
4.7e+02
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RESULT 6
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Best Local S
Matches 4
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P35483;
01-JUN-1994
01-JUN-1994
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MOD_RES
SEQUENCE
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Hormone;
                                                                                                                                                                                                                                                                                                                                  MEDLINE-98165787; PubMed-9497332;
Mackintosh J.A., Veal D.A., Beattle A.J.,
"Isolation from an ant Myrmecia gulosa of
O-glycosylated proline-rich antibacterial
J. Biol. Chem. 273:6139-6143(1998).
-i- FUNCTION: ANTIBACTERIAL PEPTIDE. HAS P
                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Arthropoda;
Pterygota; Neoptera; Endopterygo
Formicoidea; Formicidae; Myrmec
                           01-JUN-1994 (Rel. 29, Created)
01-JUN-1994 (Rel. 29, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
ALKALINE PHOSPHATASE H (EC 3.1.3.1) (H-AP) (F
                                                                                                                                                                                                                                     SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                       TISSUE-HEMOLYMPH;
MEDLINE-98165787;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P81438;
15-DEC-1998
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PFAM; PF00220;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Proc. Natl. Acad. Sci. U-1- FUNCTION: DISPLAYS C-1- SIMILARITY: BELONGS
       Bacteria; Proteobacteria;
                   Pseudomonas aeruginosa.
                                                                                                                                                                                                                                    -1- SIMILARITY: TO DROSOPHILA DROSOCIN.
Antibiotic; Glycoprotein; Insect immunity; Hemolymph.
CARBOHYD 11 1 0-LINKED (GLNAC. . .).
SEQUENCE 16 AA; 1794 MW; 80CEA3AABBC2EOAE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE, AND CARBOHYDRATE-LINKAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Myrmecia gulosa (Red bulldog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FORMAECIN 1
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30-MAY-2000
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PTM: O-LINKED GLYCAN CONSISTS OF A GAL-GALNAC
GLYCOSYLATION IS ESSENTIAL FOR FULL BIOLOGICAL
                                                                                                                                                                                                                                                                                                                          BUT NONE AGAINST
                                                                                                                                      TPHPR
                                                                                                                                                          TGHPR 12
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                                                                                                                                                                               4; Conserv
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                                                                                  STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37, Created)
37, Last sequences 39, Last annotations.
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9
                                                                                                                                                                                                                                                                                                                        CTERIAL PEPTIDE. HAS OTHER GRAM-NEGATIVE
                                                                                                                                                                                         21.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Endopterygota;
dae; Myrmecia.
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50
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             U.S.A. 91:11266-11270(1994).
OXYTOCIC ACTIVITY ON RAT UTERUS.
S TO THE VASOPRESSIN/OXYTOCIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .08;
       gamma subdivision; Pseudomonadaceae;
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17EDD76EB44449DB
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Pred.
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                                                                                  19
                                                                                                                                                                                           DB 1;
7.3e+02;
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8.9e+04;
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BACTERIA AND GRAM-POSIT
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peptides.";
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                              (FRAGMENT).
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                                                                                                                                                                                                                                                                                DISACCHARIDE,
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Best Local S
Matches 4
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Best Local :
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SEQUENCE.
STRAIN-H103;
                                                                   PFAM; PF00313; CSD; 1.

PROSITE; PS00352; COLD_SHOCK; PARTIAL.

Transcription regulation; DNA-binding;
DOMAIN 1 >21 CSD.

NON_TER 21 21 CSD.

SEQUENCE 21 AA; 2376 MW; 56A4A2800B
                                                                                                                                                                                                                                 15-JUL-1999 (Rel. 38, Created)
15-JUL-1999 (Rel. 38, Last sequence up
30-MAY-2000 (Rel. 39, Last annotation
COLD SHOCK PROTEIN CSPST (FRAGMENT).
                                                                                                                                                                                                                   Streptococcus thermoph Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                  CSPS_STRTR
P81622;
                                                                                                                                                                                                                                                                                  STRTR
                                                                                                                                                                                       STRAIN-PB18;
                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                            Streptococcus.
                                                                                                                                                                                                                                                                                                                                                                                           Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00123; ALKALINE_PHOSPHATASE;
                                                                                                                                                                                                                                                                                                                                                                                                                 INTERPRO;
                                                                                                                  [NTERPRO;
                                                                                                                                                                                                                                                                                                                         11 PRYFNQLSTG
\vdash
             7 KTGHPRYFN 15
                                                                                                                                                                                                                                                                                                                5 PSLFNRQAAG 14
                                                                                                                                                                                                                                                                                                                                                                                                                        SUBCELLULAR LOCATION: SECRETED AND PERIPLASMIC.
DEVELOPMENTAL STAGE: EXPRESSED CONSTITUTIVELY.
SIMILARITY: BELONGS TO THE ALKALINE PHOSPHATASE FAMILY
KNGTVKWEN 9
                              Similarity
4; Conserv
                                                                                                                                                                                                                                                                                                                                            Similarity 40.44; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                 IPR001952;
                                                                                                                  IPR002059;
                                                                                                                                                                                                                                                                                                                                                                                           Zinc; Magnesium;
19 19
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                                                                                                                                                                                                                           thermophilus.
                                                                                                                                                                                                                                                                          STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                    2131 MW;
                                     21.3%;
                                                                                                                                                                                                                                                                                                                                                     21.3%;
                                                                                                                                                                                                                 Bacillus/Clostridium group; Streptococcaceae;
                                                                                                                                                                                                                                                                                                                                            Score 23; DB Pred. No. 8.8e 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                 Periplasmic.
                                    Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                   C51B09D7DB22E799 CRC64;
                                                                    56A4A2800F3345EA CRC64;
                                                                                                                                                                                                                                                                          PRT;
                               Mismatches
                                                                                                                                                                                                                                          on update)
                                                                                                                                                                                                                                                                          21
                                                                                          Activator
                                                                                                                                                                                                                                                                                                                                           3.8e+02;
4;
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                                     7e+02;
                                            Length 21;
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                              Indels
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                                                                                                                                                      cold shock.";
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RESULT

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RESULT
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Best Local Similarity 50.0
Matches 4; Conservative
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PROPEP
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                       Reeck G.R., Neurath H.;
"Isolation and characterization of pancreatic procarboxypeptidase and carboxypeptidase B of the African lungfish.";
Biochemistry 11:3947-3955(1972).
-i- CATALYTIC ACTIVITY: PEPTIDYL-L-LYSTNE/ABCTNIUM ......
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
01-FEB-1995 (Rel. 31, Last annotation update)
01-FEB-1995 (Rel. 31, Last annotation update)
CARBOXYPEPTIDASE B (EC 3.4.17.2) (FRAGMENT).
Protopterus aethiopicus (Marbled lungfish).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR; A41037; A41037.
Antibiotic; Amphibian skin.
SEQUENCE 24 AA; 2457 MW;
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01-FEB-1995 (Rel. 31, Last sequence up
01-FEB-1995 (Rel. 31, Last annotation
ANTIMICROBIAL PEPTIDE PGO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PGQ_XENLA
P39080;
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Moore K.S., Bevins C.L., Brasseur M.M.,
Eck H., Zasloff M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                     Hydrolase; Carboxypeptidase; PROPEP 1 >15
                                                                                                                                                                          ÷÷
                                                                                                  PROSITE; PS00132; CARBOXYPEPT_ZN_1; PROSITE; PS00133; CARBOXYPEPT_ZN_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-STOMACH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dipnoi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Antimicrobial peptides in the stomach of Xenopus laevis.";

J. Biol. Chem. 266:19851.19857(1991).

-i. FUNCTION: ANTIMICROBIAL PEPTIDE.

-i. TISSUE SPECIFICITY: IS SYNTHESIZED IN THE STOMACH AND STORED IN A NOVEL GRANULAR MULTINUCLEATED CELL IN THE GASTRIC MUCOSA.

IT IS STORED AS ACTIVE, PROCESSED PEPTIDES IN LARGE GRANULES WITHIN THE GRANULAR GLAND SECRETIONS OF THE SKIN.

-1. SIMILARITY: BELONGS TO THE MAGAININ FAMILY OF ANTIMICROBIAL PEPTIDES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 xenopodinae;
                                                                                                                                                       INTERPRO; IPR000834;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ISSUE-PANCREAS;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9 YLKKLGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lepidosireniformes; Protopteridae; Protopterus.
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  AA,
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  1749
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Pred. No. 1.1e+03
1; Mismatches
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  124C910D937BED65 CRC64;
                                                  Zinc; Zymogen.
ACTIVATION PEPTIDE.
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PARTIAL.
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Best Local Similarity
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SEQUENCE
                                                                                                    15-DEC-1998 (Rel. 37, Created)
15-JEC-1998 (Rel. 38, Last: sequence update)
15-MAY-2000 (Rel. 38, Last: annotation update)
30-MAY-2000 (Rel. 39, Last annotation update)
L-AMINO ACID OXIDASE (EC 1.4.3.2) (LAO) (LAAO) (FRAGMENT).
Ophiophagus hannah (King cobra) (Waja hannah).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-FEB-1996 (Rel.
01-OCT-1996 (Rel.
COENZYME F420 HYDI
   TISSUE=VENOM;
MEDLINE=94361525; PubMed=8080286;
Ponnudural G., Chung M.C.M., Tan N.-H.;
"Purification and properties of the L-ar
                                                                                                                                                                                        OXLA_OPHHA
                                                                                                                                                                                                   ОРННА
                                                                                                                                                                                                                                                                                                                                                                 Oxidoreductase; Iron-sulfur;
                                                                                                                                                                                                                                                                                                                                                                                                                                      - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hydrogenase from Methanosarcina barkeri Fusaro.";

Eur. J. Blochem. 233:727-735(1995).

-i- FUNCTION: REDUCES THE PHYSTOLOGICAL LOW-POTENTIAL TWO-ELECTRON

-CCEPTOR COENZYME F420, AND THE ARTIFICIAL ONE-ELECTRON ACCEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-96085134; PubMed-8521835;
Michel R., Massanz C., Kostka S., Richter M., Fiebig K.;
"Biochemical characterization of the 8-hydroxy-5-deazaflavin-reactive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Methanosarcina barkeri.
Archaea; Euryarchaeota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-FEB-1996
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                                                       SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Methanosarcina
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                                                                                           Lepidosauria; Squamata; Scleroglossa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11 PRYFN
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                                                                                                                                                                                                                                                                                                                                                                                                GAMMA CHAIN.
SIMILARITY: TO THE SMALL
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                                                                                                                                                                                                                                                                                                                                                                                                                           SUBUNIT: PENTAMER OF TWO
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(Calloselasma
                                                                               Elapinae;
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Rel. 34, Last annotation update)
HYDROGENASE GAMMA SUBUNIT (EC 1.1:
EDUCING HYDROGENASE GAMMA SUBUNIT)
                                                                                                                                                                                       STANDARD;
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                                                                               Ophiophagus
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Pred.
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CHAINS, TWO
           L-amino
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                                                                                           Serpentes; Colubroidea;
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1.3e+03;
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           acid
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BETA CHAINS AND A
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(FRH) (
           oxidase
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           from
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           Malayan
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SEQUENCE
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01-MAR-1992 (Rel. 21, Last sequence update)
01-MAR-1992 (Rel. 21, Last annotation update)
KUNITZ-TYPE INHIBITOR-2 (PKI-2) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                          PKI2_SC
P24744;
                                                                                                                                                                                                                                                                                                                                                                              SOLIU
                                                                                                                         INTERPRO; IPR002160; -.
PFAM; PF00197; Kunitz_legume; 1.
PROSITE; PS00283; SOYBEAN_KUNITZ;
                                                                                                                                                                                     Serine protease inhibitor.
                                                                                                                                                                                                                                 STRAIN-CV. I
Walsh T.A.,
                                                                                                                                                                                                                                                                                     Magnol
                                                                                                                                                                                                                                                                                            Solanum tuberosum (Potato)
Eukaryota; Viridiplantae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oxidoreductase; Flavoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       venom of king cobra (Ophiophagus hannah).";
Int. J. Biochem. Cell Biol. 29:911-919(1997).
-i- FUNCTION: HAS CYTOTOXIC ACTIVITY (BY SIMILARITY).
-i- CATALYTIC ACTIVITY: A L-AMINO ACID + H(2)O + O(2)
                                                                                                                                                       -!- TISSUE SPECIFICITY: CORTEX OF POTATO TUBER
-!- SIMILARITY: TO SOYBEAN TRYPSIN INHIBITOR ()
PROTEASE INHIBITOR.
                                                                                                                                                                                                                                                      SEQUENCE.
                                                                                                                                                                                                                                                                          Solanales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- SIMILARITY: BELONGS TO THE FLAVIN MONOAMINE OXIDASE STRONG, TO MOUSE FIG-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -!- COFACTOR: FAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Characterization and cytotoxicity of L-amino acid venom of king cobra (Ophiophagus hannah).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ahn M.Y., Lee B.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-97449790;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 1-15
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                    GHPRYFNQ 16
                                                                                                                                                                                                                                                                                                                                                                                                                     PEYENHLA 19
                                                                                                                                                                                                                                                                                                                                                                                                                                          PRYFNOLS
GHPLRIGQ 18
                                                                                                                                                                                                                                                                                                                                                                     SOLTU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biochem. Biophys.
                                                                                                                                                                                                                                                                                     liophyta; eudicotyledons;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity 50.
4; Conservative
                                        Similarity
4; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GLYCOSYLATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             + H(2)0(2).
                                                                                                                                                                                                                                 Twitchell W.P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19 AA;
                                                                                             25 AA;
                                                                                                                                                                                                                                                                          Solanaceae; Solanum
                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PubMed=9304806;
                                                                                             2920
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kim Y.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19
                                                   20.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50
                                                                                             MW;
                                                                                                                                                                                                                                                                                                                 ast annotation update)
(PKI-2) (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 48;
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                                                                                                                                                                                                                                                                                     Embryophyta; Tracheophyta; Spermatophyta; lons; core eudicots; Asteridae; euasterids
                                                                                                                                                                                                                                           TISSUE-TUBER;
                                         0;
                                         Score 22; DB
Pred. No. 1.7e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 22; DB
Pred. No. 1.3e
1; Mismatches
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                                                                                             1F5607405921DFDC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FAD;
                                                                                                                                                                                                                                                                                                                                                                      PRT;
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                                                                                                                                                                                                  SUBTILISIN. MODERATE INHIBITOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Glycoprotein;
S (IN REF. 2).
                                                    DB 1; .
1.7e+03;
                                                                                                                                                                                                                                                                                                                                                                      25
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
1.3e+03;
                                                                                                                                                                                                                                                                                                                                                                      ₿
                                                                                                                                                                                                                       potato tubers.";
                                                                                                                                                                    (KUNITZ)
                                                                                              CRC64;
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                                                              Length
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                                          Indels
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RESULT

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DCML_PSECH_PID DCML_PID DCML_PSECH_PAC P19916
DT 01-FEE 
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AH2_PRUSE
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                                              Query Match
Best Local S
Matches 5
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kraut M., Hugendieck I., Herwig S., Meyer O.; "Homology and distribution of CO dehydrogenase carboxydotrophic bacteria."; Arch. Microbiol. 152:335-341(1989).
-I- CATALYTIC ACTIVITY: CO + H(2)O + ACCEPTOR -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
01-FEB-1992 (Rel. 24, Last annotation update)
CARBON MONOXIDE DEHYDROGENASE LARGE CHAIN (EC
                                                                                                                                                                                    Glycosidase;
NON_TER
                                                                                                                                                                                                                                                                                                                                                                                           Li C.P., Swain E., Poulton J.E.,
"Prunus serotina amygdalin hydrolase and prunasin hydrolase.",
Plant Physiol. 100:282-290(1992)
-1- CATALYTIC ACTIVITY: (R)-AMYGDALIN + H(2)0 - (R)-PRUNASIN +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-DEC-1992 (Rel. 24, Created)
01-DEC-1992 (Rel. 24, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
01-NOV-1997 (Rel. 35, Last annotation update)
AMYGDALIN BETA-GLUCOSIDASE I' (EC 3.2.1.117) (AMYGDALIN HYDROLASE
                                                                                                                                                                                                                                                                                                                                 <del>-</del> -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ISOZYME I') (AH I') (FRAGMENT).
Prunus serotina (Black cherry).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=90055678; PubMed=2818128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Li C.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rissue-seed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AH2_PRUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oxidoreductase;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
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                                                                                                                                                                                                                                                     SUBUNIT: MONOMER.

BEVELOPMENTAL STAGE: ABSENT FROM MATURING BLACK CHERRY FRUITS UNTIL 6 WEEKS AFTER FLOWERING. THEN, CONCOMITANT WITH COTYLEDON DEVELOPMENT, THE LEVEL OF ENZYME INCREASES WITH SPECIFICITY FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COFACTOR: MOLYBDENUM SUBUNIT: CONSISTS OF SMALL.
                                                                                                                                                                                                                                  EMBRYONAL TISSUES. PTM: GLYCOSYLATED.
                                                                                                                                                                                                                                                                                                                                                                             D-GLUCOSE.
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  KTGHPRYFNQL 17
                                              Similarity
5; Conserv
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                                                Conservative
                                                                                                                                                                                      Hydrolase; Glycoprotein;
                                                                                                                                                              ĀΑ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                441 MW;
                                                                                                                                                                1650 MW;
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45
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                                              Pred. No. 1.4e
1; Mismatches
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Pred. No.
                                                                                                                                                              F7CC4FA321E12EC4 CRC64;
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8.9e+04;
                                                                                          BB
                                      JB ±,
..4e+03;
5;
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                                                                                          Length 15;
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                                              Indels
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IB_SCYCA
ID MB_SCYCA
AC P01206;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 01-NOV-1995 (Rel. 32, Last annotation update)
DT 01-NOV-1995 (Rel. 32, Last annotation update)
DE MELANOTROPIN BETA (BETA-MSH).
OS Scyllorhinus canicula (Spotted dogfish) (Spotted catshark).
Scyllorhinus canicula (Spotted dogfish) (Spotted catshark).
OC Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Chondrichthyes;
OC Elasmobranchii; Galeomorphii; Galeoidea; Carcharhiniformes;
                                                                             RESULT 15
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Best Local
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Q61458;
Q1-NOV-1997
Q1-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUBMITTED (NOV-1994) to the EMBL/GenBank/DDBJ databases.

-I- FUNCTION: MEMBER OF CAK WHICH ACTIVATES CYCLIN-ASSOCIATED CDC2/CDK2/CDK4 BY THREONINE PHOSEMORYLATION. ITS EXPRESSION AND ACTIVITY ARE CONSTANT THROUGHOUT THE CELL CYCLE. CAK IS TIGHTLY ASSOCIATED WITH A MULTIPROTEIN COMPLEX TFIIH, WHICH PLAYS A DUAL ROLE IN TRANSCRIPTION AND DNA REPAIR (BY SIMILARITY).

-I- SUBUNIT: MANMALIAN CAK CONTAINS THREE COMPONENTS: CDK7, CYCLIN H, AND AN ASSEMBLY FACTOR CALLED MAT1.

-I- SUBCELLULAR LOCATION: NUCLEAR (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss institute of Bioinformatics and the EMBL outstation the European Bioinformatics institute. There are no restrictions on its the EMPL outstation in the produced by non-profit institutions as long as its content is in no way use by non-profit institutions as long as its content is in no way
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; X82441; CAA57822.1;
HSSP; P51946; 1KXU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
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NON_TER 1 1
NON_TER 18 18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hall F.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-CD-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-OCT-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     similarity 36.
4; Conservative
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Metazoa; Chordata; C
Metazia; Rodentia; S
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(Rel. 35, Last seq
(Rel. 40, Last ann
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2105 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19.4%;
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| division;
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Pred. No. 1.7e+03;
Pred. No. 1.7e+03;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nuclear
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Best Local S
Matches 4
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SEQUENCE
SEQUENCE:
STRAIN-OM5;
MEDLINE-90055678; PubMed-2818128;
                                                                                   01-FEB 1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
01-JUN-1994 (Rel. 29, Last annotation update)
CARBON MONOXIDE OXYGENASE [CYTOCHROME B-561]
                                                                                                                    P19921;
01-FEB-1991
                                                                                                                                                                                                                                                                                                       NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Uromastyx hardwickii (Indian spiny-tailed lizard).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Iguania; Acrodonta; Agamidae; Leiolepinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
01-MAY-1991 (Rel. 18, Last annotation update)
HEMOGLOBIN BETA-2 CHAIN (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P18992;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-75113445; PubMed-4452470;
Love R.M., Pickering B.T.;
"A beta-MSH in the pituitary gland of the spotted dogfish
(Scyllorhinus canicula): isolation and structure.";
Gen. Comp. Endocrinol. 24:398-404(1974).
                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=84029159; PubMed=6628672;
Naqvi S., Zaidi Z.H., von Bahr-Lindstroem
Joernvall H.;
                                                                                                                                         DCMS_PSECA
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                                         Bradyrhizobium
                                                     Pseudomonas carboxydovorans.
Bactería; Proteobactería; al
                                                                                                                                                                                                                                                                                                                                                          FEBS Lett. 162:290-295(1983).
PIR; A05305; A05305.
                                                                                                                                                                                            8 TGHPR 12
||:|:
15 TGNPK 19
                                                                                                                                                                                                                                                                                                                                      PROSITE;
                                                                                                                                                                                                                                                                                                                           leme; Oxygen transport; Respiratory
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                                                                           FRAGMENT)
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mes 3; Conserv
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4; Conserv
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                                        Proteobacteria; alpha subdivision; bbium group; Oligotropha.
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ing B.T.;
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1.7e+03;
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RESULT
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NSKI_SARBU STANDARD; PRT; 9 AA.

ID NSKI_SARBU STANDARD; PRT; 9 AA.

AC P41492;
DT 01-NOV-1995 (Rel. 32, Created)
DT 01-NOV-1995 (Rel. 32, Last sequence update)
DT 01-FEB-1996 (Rel. 33, Last annotation update)
DE NEOSULFAKININ-I (NEB-SK-I).
SSE PRE PRO BOOK
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LEUMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Neuropeptide;
MOD_RES
MOD_RES
SEQUENCE 9 A
                                    LEUMA (**
LSK2_LEUMA STANDARD; PRT; 10 AA P09039;
01-NOV-1988 (Rel. 09, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-NOV-1995 (Rel. 32, Last annotation update)
LEUCOSULFAKININ-II (LSK-II)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sarcophaga bullata (Grey flesh fly) (Neobellieria bullata).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Oestroidea; Sarcophagidae; Sarcophaga.
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Arch. Microbiol. 152:335-341(1989)
-1- CATALYTIC ACTIVITY: CO + H(2)0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIR;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE;
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2 H(+) + FERRICYTOCHROME B-561.
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GHMRF
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3; Conserv
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3; Conserv
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1187
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on of CO dehydrogenas
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AMIDATION (POTENTIAL).
8B0A0691E86B5AAA CRC64;
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maderae (Madeira cockroach), an a americana (American cockroach)

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SPECIES-I.MADERAE;
SPECIES-1.MADERAE;
MEDLINE-87048769; PubMed-3778455;
MEDLINE-87048769; PubMed-3778455;
Nachman R.J., Holman G.M., Cook B.J., Haddon W.F., Ling N.;
Nachman R.J., Holman G.M., Cook B.J., Haddon W.F., Ling N.;
"Leucosulfakinin-II, a blocked sulfated insect neuropeptide homology to cholecystokinin and gastrin.";
"Leucosulfakinin-II, a blocked sulfated insect neuropeptide homology to cholecystokinin and gastrin.";
"Leucosulfakinin-II, a blocked sulfated insect neuropeptide homology to cholecystokinin and gastrin.";
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Pterygota; Ne
Blaberoidea;
[1]
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                         MEDLINE-86315858; PubMed-3749893;
Machman R.J., Holman G.M., Haddon W.
Machman R.J., Holman G.M., Haddon W.
"Leucosulfakinin, a sulfated insect
gastrin and cholecystokinin.";
Science 234:71-73(1986)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence up
01-NOV-1995 (Rel. 32, Last annotation
LEUCOSULFAKININ-I (LSK-I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Isolation and structure of two gastrin/CCK-like neuropeptides from the American cockroach homologous to the leucosulfakinins."; Neuropeptides 14:145-149(1989).
-!- FUNCTION: CHANGE THE FREDUENCY AND AMPLITUDE OF CONTRACTIONS OF THE COCKROACH HINGUT. STIMULATES MUSCLE CONTRACTION OF HINDGUT.-!- SIMILARITY: BELONGS TO THE GASTRIN/CHOLECYSTOKININ FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Leucophaea maderae (Madeira cockroach).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Orthopteroidea; Dictyoptera; Blattaria;
Blaberoidea; Blaberidae; Leucophaea.
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P04428;
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                                                                                                                                                                                                           -!- SIMILARITY: BELONGS PIR; A01622; GMROL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
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                                                                                                                                                                                                                                     FUNCTION: CHANGE THE FREQUENCY AND AMPLITUDE OF CONTRACTIONS THE COCKROACH HINGUT. INHIBITS MUSCLE CONTRACTION OF HINDGUT. SIMILARITY: BELONGS TO THE GASTRIN/CHOLECYSTOKININ FAMILY.
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B60656; B60656
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                                                                                                   Sulfatation.
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SULFATATION (I
P.AMERICANA).
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9B4F5391E86B5AAA CRC64;
                                 AMIDATION
                                                                  SULFATATION.
7E4E0680E86B5AAB
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neuropeptide
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RESULT 22
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TISSUE-BRAIN;
Schoofs L., Holman G.L., Hayes T.K., Na Schoofs L., Holman G.L., Hayes T.K., Na Schoofs L., Holman G.L., Hayes T.K., Na Schoofs L., Holman G.L., Wilson I. (eds.);
(In) McCaffery A., Wilson I. (eds.);
Chromatography and isolation of insect pp. 231-241, Plenum Press, New York (19: pp. 231-241, Plenum Press, New York (19: -1- FUNCTION: MYOTROPIC PEPTIDE CASTRIN: -1- SIMILARITY: BELONGS TO THE GASTRIN INTERPRO; IPRO01651; -...
R PROSITE; PS00259; GASTRIN; 1.
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Best Local :
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MOD_RES 6
MOD_RES 11 1
SEQUENCE 11 AA; 14
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p47733;
01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence up
15-DEC-1998 (Rel. 37, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Isolation and structure of two gastrin/CCK-like neuropeptides the American cockroach homologous to the leucosulfakinins."; Neuropeptides 14:145-149(1989).
-I- FUNCTION: STIMULATES HINDGUT CONTRACTIONS.
-I- SIMILARITY: BELONGS TO THE GASTRIN/CHOLECYSTOKININ FAMILY.
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P36885;
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Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda;
Pterygota; Neoptera; Orthopteroidea; Dictyoptera; Bl
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01-JUN-1994 (Rel. 29, Last sequence up
01-FEB-1996 (Rel. 33, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                  Locusta migratoria (Migratory locust).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda;
Pterygota; Neoptera; Orthopteroidea; Orthoptera; Cae.
Acridomorpha; Acridoidea; Acrididae; Locusta.
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                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
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01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-NOV-1995 (Rel. 32, Last sequence update)
01-FEB-1996 (Rel. 33, Last annotation update)
NEOSULFAKININ-II (NEB-SK-II), (Neobellieria bullata).
Sarcophaga bullata (Grey flesh fly) (Neobellieria bullata).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Oestroidea; Sarcophagidae; Sarcophaga.
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P80614;
01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
UNKNOWN PROTEIN FROM 2D-PAGE OF ETIOLATED COLEOPTILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-93083101; PubMed-1360367;
Fonagy A., Schoofs L., Proost P., van Damme J., de Loof A.;
Fonagy A., Schoofs L., Proost P., van Damme J., de Loof A.;
Fonagy A., Schoofs L., Proost P., van Damme J., de Loof A.;
Fonagy A., Schoofs L., Proost P., van Damme J., de Loof A.;
Fonagy A., Schoofs L., van Damme J., de Loof A.;
Fonagy A., Schoofs Protection of two sulfakinin-like peptides

"Isolation and primary Structure of two sulfakinin-like peptides

comp. Biochem. Physiol. 103C:135-142(1992).

"ISOLATION MYOTROPIC PEPTIDE.

"ISIMILARITY: BELONGS TO THE GASTRIN/CHOLECYSTOKININ FAMILY.

INTERPRO; IPRO01651; -.

PROSITE; PS00259; GASTRIN; 1.
Touzet P., Riccardi F., Mo:
Pernollet J.-C., Zivy M., (
"The maize two dimensional
                                                                                                                                                 Zea mays (Maize).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta;
Magnoliophyta; Liliopsida; Poales; Poaceae; Zea.
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                                                                        TISSUE-COLEOPTILE;
                                                                                                  SEQUENCE
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TISSUE-HEAD;
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1 PYRROLIDONE CARBOXYLIC ACID.
7 SULFATATION (POTENTIAL).
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                         Morin C., Damerval C., Huet J.-C., de Vienne D.;
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AMIDATION (POTENTIAL).
8B4E06D5B61C62AA CRC64;
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9B5B5DA9BD6B5AAA CRC64;
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1.9e+03;
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Theor. Appl. Genet. 93:997-1005(1996).
Theor. MISCELLANEOUS: ON THE 2D-GEL THE DETERMINED PI OF THIS UNKNOWN
PROTEIN IS: 6.4, ITS MW IS: 38.8 KDA.
THE SIMILARITY: BELONGS TO THE ZINC-CONTAINING ALCOHOL DEHYDROGENASE
                                                                                                                                        MAIZE-2DPAGE; P80614; COLEOPTILE.
MAIZEDB; 123934; -.
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                  YAIKTGH
YPVVPGH 14
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15 AA;
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1785 MW;
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085462 avian sarco

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Homo sapiens (Human). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E Mammalia; Eutheria; Primates; Catarrhini; Hominidae; NCBI\_TaxID=9606;

Euteleostom1; Homo.

Q9UCA7 PRELIMINARY; PRT; 21 AA.
Q9UCA7;
Q1-MAY-2000 (TrEMBLrel. 13, Created)
Q1-MAY-2000 (TrEMBLrel. 13, Last sequence update)
Q1-JUN-2000 (TrEMBLrel. 14, Last annotation update)
AMELOGENIN (FRAGMENT).

Catalano-Sherman J., Laskov R., Palmon A., David S., Deutsch D.; "production of a monoclonal antibody against human amelogenin."; Calcif. Tissue Int. 54:76-80(194).
SEQUENCE 21 AA; 2367 MW; 21440C1415CB578F CRC64;

SEQUENCE. MEDLINE-94163560; PubMed-8118759;

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## ALIGNMENTS

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SEQUENCE.
SEQUENCE.
MEDLINE-92267013; PubMed=1587270;
MEDLINE-92267013; PubMed=1587270;
Minoetzel J., Svendsen I., Simpson D.J.;
Minoetzel J., Svendsen I., Simpson D.J.;
Minoetzel J., Svendsen I., Simpson D.J.;
Tolation of the photosystem I antenna polypeptides
Isolation of three pigment-binding antenna complexes.";
Eur. J. Biochem. 206:209-215(1992).
Eur. J. Biochem. 206:209-215(1992).
                                                                                                                                             Q9TWL2;
01-MAY-2000
01-MAY-2000
                                          01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence up
01-JUN-2000 (TrEMBLrel. 14, Last annotation
GLUTATHHOME S-TRANSFERASE (EC 2.5.1.18)
Octopus vulgaris (Octopus).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pylori.";
Nature 388:539-547(1997).
EMBL; AE000651; AAD08577.1;
TIGR; HP1528; -
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STRAIN-26695 / ATCC 700392;

MEDLINE-97394467; PubMed-9252185;

Tomb J.-F., White O., Kerlavage A.R., Clayton R.A., Sutton G.G.,

Tomb J.-F., White O., Kerlavage A.R., Clayton R.A., Sutton G.G.,

Tomb J.-F., White O., Kerlavage A.R., Clayton R.D., Obugherty B.A.

Relson K., Quackenbush J., Zhou L., Kirkness E.F., Peterson S.,

Loftus B., Richardson D., Dodson R., Khalak H.G., Glodek A.,

Loftus B., Richardson D., Dodson R., Khalak H.G., Glodek A.,

McKenney K., Fitzgerald L.M., Lee N., Adams M.D., Hickey E.K.,

Berg D.E., Gocayne J.D., Utterback T.R., Peterson J.D., Kelley J.M.

Cotton M.D., Weidman J.M., Fujii C., Bowman C., Watthey L., Wallin I

Hayes W.S., Borodovsky M., Karp P.D., Smith H.O., Fraser C.M.,
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01-JUN-2000
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Bacteria; Proteobacteria; epsilon subdivision; Helicobacter group;
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AL 3.1 KDA PROTEIN.
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(Octopus).
oa; Mollusca; Cephalopoda; Coleoidea;
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Q15133;
Q1-NOV-1996;
Q1-NOV-1996;
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01-MAY-2000 (TrEMBLrel. 13, Last sequence u
01-MAY-2000 (TrEMBLrel. 13, Last annotation
PENICILLIN-BINDING PROTEIN 4, PBP4.
Enterococcus hirae.
Bacteria; Firmicutes; Bacillus/Clostridium
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Q9R5S1;
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GHF-1.
Homo sapiens (Human).
Homosapiens (Human).
Horia; Metazoa; Chordata; Metazoa; Primates;
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Jacques P., el Kharroubi A., Van Beeumen J., Piras G
Ghuysen J.M.;
"Mode of membrane insertion and sequence of a 32-ami
stretch of the penicillin-binding protein 4 of Enter
FEMS Microbiol. Lett. 66:119-123(1991).
SEQUENCE 24 AA; 2561 MW; CD2FC38D78C2F20B CRC64;
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lens S-crystallin.";
J. protein Chem. 13:609-618(1994).
SEQUENCE 20 AA; 2524 MW; 57C23D23DA8B3D9D CRC64;
MEDLINE-95237623; PubMed-7721104;
Delhase M., Vila V., Hooghe-Peters E.L., Castrillo J
"A novel pituitary transcription factor is produced by
                                                                                                                                                                                                                                                                                                                                                     GHF-1 TRANSCRIPTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Incirrata; Octopodidae;
NCBI_TaxID=6645;
[1]
                                                                                                  TISSUE-PLACENTA;
                                                                                                                            SEQUENCE FROM N.A.
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EMBL; X77223; CAA54441.1; -
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METALLOENDOPEPTIDASE I, METALLOENDOPEPTIDASE II,
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"Cloning of promoter-like sequences from Lactobacillus
subsp. paracasei CG11 and their expression in Escherich
Lactococcus lactis, and Lactobacillus reuteri.";
Can. J. Microbiol. 40:1043-1050(1994).
EMBL; S76788; AAB33947.2;
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                         MEDLINE-92121147; PubMed-1769959; Tsuyuki H., Kajiwara K., Fujita A., "Purification and characterization metalloendopeptidases I and II."; J. Biochem. 110:339-344(1991).
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01-MAY-2000
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                                                                                                                                                                                                                               SEQUENCE FROM N.A.

MEDILINE-92201825; PubMed-1551666;

MIChOlls A.C., Oliver J., Renouf D.V., Heath D.A., Pope F.M.;

Nicholls A.C., Oliver J., Renouf D.V., Heath D.A., Pope F.M.;

"The molecular defect in a family with mild atypical osteogenesis imperfecta and extreme joint hypermobility: exon skipping caused ill-bp deletion from an intron in one COLIA2 allele.";

Hum. Genet. 88:627-633(1992).

EMBL; S89895; AAB21862.1; -.

SEQUENCE 12 AA; 1161 MW; D5BD7D21FAE861B6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Mode of membrane insertion and sequence of a stretch of the penicillin-binding protein 4 of FEMS Microbiol. Lett. 66:119-123(1991).
SEQUENCE 25 AA; 2707 MW; 9189FB2F034C44BF
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Eukaryota; Metazoa;
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O1-MAY-1999 (TremBLrel. 10, Created)
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O1-MAY-1999 (TremBLrel. 13, Last annotation update)
PROBABLY NOT EXPRESSED DUE TO SNRNA OVERLAPPING (FRAGMENT).
Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycetes; Saccharomycetales;
Saccharomycetaceae; Saccharomyces.
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Q9TRR4;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
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01-WAY-2000 (TrEMBLrel. 13, Last sequence update)
01-CCT-2000 (TrEMBLrel. 15, Last annotation update)
CALCYCLIN-ASSOCIATED PROTEIN, CAP50-CA2+/PHOSPHOLIPID-BINDING PROTEIN
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Submitted (JUL-1996)
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Boyer J., Fairhead
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              094149
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Pred. No. 1.2e
5; Mismatches
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Pred. No. 1
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O13594;
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  Q85462;
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Q9TRQ6;
01-MAY-2000
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SEQUENCE
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
Bovidae; Bovinae; Bos.
NCBI_TaxID-9913;
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Eukaryota; Fungi; Ascomycota; Saccharomycetes; Saccharomycetaceae; Saccharomyces.
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01-MAY-2000 (TrEMBLrel. 13, I
01-MAY-2000 (TrEMBLrel. 13, I
CALCYCLIN-ASSOCIATED PROTEIN
                                                                                 Q85462
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"CAP-50, a newly identified annexin, fibroblast 3Y1 cells.";
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MEDLINE-92317074; PubMed-1618851;
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Boyer J., Fairhead C., G

Thierry A., Dujon B.;

Submitted (JUL-1996) to
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E 21 AA;
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NA; 2352 MW; 998D0E8AC173DA19
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41.2%;
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annotation update)
TIDE L-13, CAP-50-ANNEXIN.
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No. 1.3e+03;
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                                                                                                                                                                                                                                                                                              MHC.
SEQUENCE
                                                                                                                                                                                                                                                                                                                  MEDLINE-94240094; PubMed-8183884; Angeletti R.H., Nathenson S.G.; Joyce S., Kuzushima K., Kepecs G., Angeletti R.H., Nathenson S.G.; "Characterization of an incompletely assembled major histocompatibility class I molecule (H-2Kb) associated with unusually long peptides: implications for antigen processing and presentation.", proc. Natl. Acad. Sci. U.S.A. 91:4145-4149(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-2000 (TIEMBLIFE! 13, Created)
01-MAY-2000 (TIEMBLIFE! 13, Last sequence update)
01-MAY-2000 (TIEMBLIFE! 13, Last sequence update)
01-MAY-2000 (TIEMBLIFE! 13, Last annotation update)
BETA 2M- CLASS I-BINDING PEPTIDE-MAJOR HISTOCOMPATIBILITY COMPLEX
H-2KB-SPECIFIC MOLECULE POORLY ASSOCIATED WITH BETA 2-MICROGLOBULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9TNQ1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "cis-acting intron mutations that affect retroviral RNA splicing: implication for J Virol. 62:2686-2695(1988).
EMBL; M21395; AAA42413.1; -. NON_TER
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MEDLINE-88275035; PubMed-2839694;
Katz R.A., Kotler M., Skalka A.M.
           01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAY-2000 (TrEMBLrel. 13, Last annotation update)
01-MAY-2000 (TrEMBLrel. 13, Last annotation update)
MAJOR POLLEN ALLERGEN PLA L 1 (FRAGMENT)
Plantago lanceolata (narrow-leaved plantain)
Eukaryota; Viridiplantee: Embryophyta; Tracheophyta; Spermatophyta;
Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids
                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10095;
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NCBI_TaxID=11876;
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Viruses; Retro
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|: ||:|
1 AVLTGYP 7
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1007
                                                                                                                                                                                                                                                                                              1754 MW;
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Rodentia;
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57.1%;
                                                                                                                                                                                                                                           23.18;
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Plantago.
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                                                                                                                                                                                                                               Score 25; DB 7; L6
Pred. No. 1.4e+03;
0; Mismatches 2;
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Pred. No. 8.
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Sciurognathi; Muridae;
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8.8e+02;
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; Murinae; Mus.
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Best Loc
Matches
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093191;
01-NOV-1998
01-NOV-1998
                                                                                                                                             Q9ZEJ4
Q9ZEJ4;
Q1-MAY-1999
Q1-MAY-1999
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Calabozo B., barber D., Polo F.;
Calabozo B., barber D., Polo F.;
"Purification and characterization
lanceolata pollen, Pla 1 1.";
J. Allergy Clin. Immunol. 0:0-0(199)
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J. Gen. Virol. 79:2171-2199(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN-PORCINE CIRCOVIRUS TYPE II;
MEDLINE-98418498; PubMed-9747726;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORF8
                                                                                                              01-MAY-1999 (TrEMBLrel. 10,
01-MAY-1999 (TrEMBLrel. 10,
01-MAY-1999 (TrEMBLrel. 10,
DNAJZ PROTEIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (MAR-1998) to the EMBL; AF055394; AAC35334.1; EMBL; AF055393; AAC35324.1; SEQUENCE 21 AA; 2369 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    porcine circovirus.
Viruses; ssDNA viruses;
NCBI_TaxID=46221;
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[1]
Anabaena sp.
Bacteria; Cyanobacteria;
NCBI_TaxID=1167;
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Similarity 27.38;
3; Conservative
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8 AA;
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Pred. No. :1.7e
2; Mismatches
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Last sequence up
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Pred. No. 2e+0
3; Mismatches
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Q3JLD7;
Q3JLD7;
Q3JLD7;
Q3JLD7;
Q1-OCT-2000 (TrEMBLrel. 15; Last sequence update)
Q1-OCT-2000 (TrEMBLrel. 15; Last annotation update)
Q1-OCT-2000 (TrEMBLrel. 15; Last annotation update)
P53 TUMOR SUPPRESSOR (FRAGMENT).
Mesocricetus auratus (Golden hamster).
Mesocricetus auratus (Golden hamster).
Eukaryota; Metazoa; Chordata; Cranlata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Rodentia; Sciurognathi; Muridae; Cricetinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     [1]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
STRAIN-PCC 7120;
Pohl B.;
Pohl B.;
11-15 (1999), Unit
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NON_TER
SEQUENCE
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Tillmann
              "Species-specific region of the p53
                                                      TISSUE-KIDNEY;
Laverdiere M., Beaudoin
                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                           Q9JLD7
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                                                                                                                                 NCBI_TaxID=10036;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hydrolase.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tillmann H., Stein S., Liehr T., Eschric "Structure and chromosomal localization fructose-1,6-bisphosphatase genes."; Gene 247:241-253(2000).
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            audoin J., Lavigueur A.; regulation of alternative tumor suppressor gene.";
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EMBL; AF1
NON_TER
SEQUENCE
                                                                                          Bertram P.A., Schmitz R.A., Linder D., Thauer R.K.;
"Tungstate can substitute for molybdate in sustaining growth of Methanobacterium thermoautotrophicum. Identification and characterization of a tungsten isoenzyme of formylmethanofuran
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAY-2000 (TrEMBLrel. 13, 01-MAY-2000 (TrEMBLrel. 14, 01-JUN-2000 (TrEMBLrel. 14, 65 KDA TUNGSTEN CONTAINING )
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01-MAY-2000
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Bacteria; Firmicutes; Bacillus/Closti
   SEQUENCE
                                dehydrogenase.";
Arch. Microbiol.
                                                                                                                                                                                                                                                                                                                                        Archaea; Euryarchaeota;
Methanobacterium.
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SEQUEN
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01-MAY-2000
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MEDLINE=94043690; PubMed=7693750;

Barnett L.A., Whitton J.L., Wada Y., Fujinami R.S.;

"Enhancement of autoimmune disease using recombinant vaccinia virus encoding myelin proteolipid protein.";

J. Neuroimmunol. 48:120-120(1993).

SEQUENCE 13 AA; 1538 MW; 2A33FF99B5807733 CRC64;
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID-10095;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

NCBI_TaxID-9606;
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-CCT-2000 (TrEMBLrel. 15, Last annotation update)
ASPARTYLGLUCOSAWINIDASE ALPHA SUBUNIT (FRAGMENT).
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     8 GHPDKF 13
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4; Conservative
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(TrEMBLrel. 13, Last annotation update)
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pred. No. 3e+
no. 3e+
                                                                                                                                                                                           Score 23; DB 11; L
Pred. No. 2.4e+03;
Pred. No. 2.4e+03;
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Search completed: February 5, 2001, 10:55:26

GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.

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Result
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Maximum Match
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W01796
W12404
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                                                   Glutamic acid deca
GAD65 fragment, pe
Glutamic acid deca
GAD65 fragment, pe
65 kD Glutamic aci
Human 65 kD glutam
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Peptide derived fr
65 kD Glutamic aci
GAD65 residues 177
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Human 65 kD glutam
GAD65 residues 173
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Y67904	R79703	w	P60962	Y26613	w	R74073	w	16	037	R57905	Y13277	Y13300	Y13251	R63875	R68754	Y99311	W70635	Y58198	W92559	W92558	X01008	W80790	W82926	W82934	W35210	W35218	R43130	Y57311	Y91936	R49435	R49436	Y36566
EGF receptor autop	EGF receptor Tyr k	oplasma o	hich	HIV-derived lipope	Negative	erantigen pep	(3-25) peptid	d doo	10-25 c	~	4		7	₹	Cytotoxic T lympho	ISS I	d generat	Human STRAP-1 pept	beta-a	ta-actin	terial immuno	٢	ipathogenic pe		tereomer	Diastereomer pepti	2	erugino	sRec2 peptide re	algranulin B pos	nilin	Fragment of human

### ALIGNMENTS

# W18845 standard; peptide; 20 AA.

W18845;

05-JAN-1998 (first entry)

65 kD Glutamic acid decarboxylase peptide fragment IV.

GAD; 65 kD; human; glutamic acid decarboxylase; autoreactive; diagnosis; insulin-dependent diabetes mellitus; IDDM; cell-mediated disease; multiple sclerosis. predisposition; autoimmune; tumour; rheumatoid arthritis;

WIRESULT WINESULT WIN (BOEF ) BOEHRINGER MANNHEIM GMBH 20-JUL-1995; DE19526561-A1. Synthetic 20-JUL-1995; 23-JAN-1997. 95DE-1026561 95DE-1026561

Donie F, Endl J, Ganz M, Jung G, Pozzilli P, Stahl P; Kientsch-engel

Skin test for diagnosis of cell-mediated diseases, esp. diabetes involving intradermal admin. of auto:reactive substances

WPI; 1997-088254/09.

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W01796
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                             Albert W,
Stahl P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             W18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for decarboxylase (GAD). The fragments are autoreactive substances used for disposit of insulin-dependent diabetes mellitus (IDDM). The diapposis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected by administration an autoreactive substance intradermally and establishing the diagnosis on the basis of the occurrence or lack of a positive reaction at the site of administration. The method is used for diagnosis of the occurrence or confidence in the site of administration.
The present peptide is a framgent of the human 65 kD glutamine decarboxylase (GAD), which can be used to diagnose, or diagnose a predisposition to, a tumour or immunological disease, preferably an autoimmune disease, especially diabetes. It can also be used as a reagent to determine specific T cell subpopulations, in medicaments to treat or prevent immunological diseases, prefereably autoimmune diseases, especially diabetes, to produce antigens, especially subpopulations, which can be used to produce antigens or for
                                                                                                                                                                                                                                                       Claim 1;
                                                                                                                                                                                                                                                                                                                             Glutamine decarboxylase peptide(s) - for diagnosis and therapy
                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1997-078452/08
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human 65 kD glutamine decarboxylase peptide.
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                                                                                                                                                                                                                                                    Page 12;
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Van Endert
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Pred. No. 1.8e-12;
Mismatches 0;
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Best Local :
                         w12403-w12413 represent fragments and analogues of the the 65 kD isoform of human glutamic acid decarboxylase (GAD65) (see w12402 for full length wild type protein). GAD is an enzyme expressed in the beta cells of the pancreas, and in neurons of the central nervous system. There are two isoforms of GAD, a 67 kD isoform, and GAD65. Immunodominant regions of GAD65 have been identified in Type I dilabetic patients. These GAD65 fragments, and analogues, are used in the methods of the invention. The methods are for detecting or treating diabetes or a predisposition to diabetes. The peptides can also be used for ameliorating an autoimmune response in a patient. Alteration of the native peptides with selective changes of crucial residues can induce unresponsiveness or change the responsiveness of antigen-specific autoreactive T cells. The peptide analogues compete for binding to MHC and do not cause proliferation of the corresponding native peptide-specific T cells.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65 kD glutamic acid decarboxylase; human; GAD65; enzyme; pancreas; neuron; central nervous system; type I diabetes; autoimmune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                          Claim 22; Page -; 28pp;
                                                                                                                                                                                                                                                                                New human glutamic acid decarboxylase peptide(s) - used for treatment, diagnosis and determining predisposition to diabetes
                                                                                                                                                                                                                                                                                                                           WPI; 1997-087322/08
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                                                                                                                                                                                                                                                                      ameliorating auto-immune responses.
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NEUROCRINE BIOSCIENCES INC.
ST BARTHOLOMEM'S HOSPITAL CENT CLINICAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "optionally substituted, providing at least 7 residues remain wild type"
                                                                                                                                                                                                                                          English.
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Pred. No. 1.8e-12;
; Mismatches 0;
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                                                                                                                                                             Q86481 and Q86482 encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 were derived. These fragments can be used to detect autoantibodies against GAD, e.g. to diagnose and treat GAD-related autoimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
         03-APR-2000
                                                                                                                                                                                                                                   New polypeptide fragments of glutamic acid decarboxylase - for diagnosis and treatment of auto: immune disease, esp. insulin dependent diabetes, also related nucleic acid, vectors, antibodies, hybridoma(s) etc.
                       Y59572;
                                      Y59572 standard;
                                                                                                                                                 Sequence
                                                                                                                                                                                                                    Example 11; Page 76; 100pp; English
                                                                                                                                                                                                                                                                           WPI; 1995-131360/17.
                                                                                                                                                                                                                                                                                         Clare-Salzler MJ, Erlander MG,
                                                                                                                                                                                                                                                                                                                         17-SEP-1993;
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                                                                                                                                                                                                                                                                                                                                                                                                    Glutamic acid decarboxylase; GAD65; auotimmune disorders; insulin-dependant diabetes mellitus; stiff man disease.
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                                                                                                          Local Similarity 92.9
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                                                                                          7 KIGHPRYFNQLSIG 20
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Pred. No.
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                                                                                                                 Score 72; DB 16;
Pred. No. 3.5e-06;
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                                                                                                           Mismatches
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                                                                                                                                                                                                                                                                                         Kaufman DL,
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                                                                                                                                                                                                                                                                                         Tobin AJ;
                                                                                                                        Length 20;
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                                                                                                                                                                                                                                   RESULT
R72271
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                                                 Glutamic acid decarboxylase; GAD65; auotimmune disorders; insulin-dependant diabetes mellitus; stiff man disease.
       23-MAR-1995
                      W09507992-A.
                                                                           Glutamic
                                                                                                                                                                                                                                   Sequence
                                    Homo sapiens
                                                                                          13-NOV-1995
                                                                                                          R72271;
                                                                                                                                        σ
                                                                           acid
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decarboxylase

(GAD65)

fragment.

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Query Match
Best Local Similarity
Matches 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This sequence represents a fragment of the glutamic acid decarboxylase 65 (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are available from natural sources.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAD65; glutamic acid decarboxylase 65; autoimmune disorder; IDDM;
insulin dependent diabetes mellitus; Stiff man disease; diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ameliorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stiff man
                                                                                                R72271 standard; Peptide; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-JUN-1995;
21-SEP-1990;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-JUN-1991;
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                                                                                                                                                                                                                                                                         7 KTGHPRYFNQLSTG 20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       20 AA;
                                                                                                                                                                                                                                                                                                                          Conservative
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(first entry)
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90US-0586536.
91US-0716909.
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                                                                                                                                                                                                                                                                                                                                                  66.7%;
92.9%;
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Pred. No. 3.5e-06;
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RESULT
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Best Local
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21-SEP-1990;
18-JUN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    goower and goods? encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 were derived. These fragments can be used to detect autoantibodies against GAD, e.g. to diagnose and treat GAD-related autoimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
 Claim 1;
                                                                                                                                                                                                                                                                                              GAD65 fragment, peptide #11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI;
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                                                                                                                                                                     09-APR-1997;
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                                                                                                                                                                                                             US5998366-A
                                                                                                                                                                                                                                                              GAD65; glutamic acid decarboxylase 65; autoimmune disorder; IDDM; insulin dependent diabetes mellitus; Stiff man disease; diagnosis;
                                                                                                                                                                                                                                                                                                                   03-APR-2000
                                                                                                                                                                                                                                                                                                                                       Y59551;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antibodies, hybridoma(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New polypeptide fragments of glutamic acid decarboxylase diagnosis and treatment of auto:immune disease, esp. insudependent diabetes, also related nucleic acid, vectors,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-SEP-1993;
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                               Ameliorating glutamic acid disorders such as insulin of
                                                                WPI; 2000-095930/08
                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
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                                                                                  Tobin AJ,
                                                                                                       (REGC ) UNIV CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                            Y59551 standard;
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  Column
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                                                                                  Kaufman DL,
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                                                                                                                           90US-0586536.
91US-0716909.
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  42;
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61pp; English
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                                                                                  Erlander
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                               dependent diabetes mellitus and Stiff
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Pred. No.
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0.00044;
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Best Local S
Matches 11
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involving
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            alter GAD function, for generating monocional antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosts is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are available from natural sources.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence represents a fragment of the glutamic acid decarboxylase 65 (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monocional antibodies and in
                            W18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for diagnosis of insulin-dependent diabetes mellitus (IDDM). The diagnosis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected by administering an autoreactive substance intradermally and establishing the diagnosis on the basis of the occurrence or lack of a positive reaction at the site of administration. The method is used for diagnosis of autoimmune and tumour diseases, preferably T-cell-mediated diseases
                                                                                                                                                                                                                                                                                                        Donie F,
Pozzilli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                such as rheumatoid
                                                                                                                                                                                                                                                                        WPI; 1997-088254/09
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 multiple sclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAD; 65 kD; human; glutamic acid decarboxylase; autoreactive; disinsulin-dependent diabetes mellitus; IDDM; cell-mediated disease; predisposition; autoimmune; tumour; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               65 kD Glutamic acid
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les 11; Conserv
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                                                                                                                                                                                            11; Page 9;
                                                                                                                                                                                                                                                                                                        Endl J,
P, Stahl
                                                                                                                                                                                                                        for diagnosis of cell-mediated diseases, esp. diabetes intradermal admin. of auto:reactive substances
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                                                                                                                                                                                          12pp; German
                arthritis,
                                                                                                                                                                                                                                                                                                                        Ganz M,
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                                                                                                                                                                                                                                                                                                                        Jung G,
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Pred. No.
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                  multiple
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0.00044;
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                  and especially
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                                                                                               Query Match
Best Local Similarity
Matches 10; Conserv
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Best Local Similarity
                                                                                                                                                                                                                                                     The present peptide is a framgent of the human 65 kD glutamine decarboxylase (GAD), which can be used to diagnose, or diagnose a predisposition to, a tumour or immunological disease, preferably an autoimmune disease, especially diabetes. It can also be used as a reagent to determine specific T cell subpopulations, in medicaments to treat or prevent immunological diseases, prefereably autoimmune diseases, especially diabetes, to produce antigens, especially subpopulations, which can be used to produce antigens or for reinjection, optionally after inactivation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Albert W,
Stahl P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tumour; immunological; disease; autoimmune; diabetes; reagent;
determination; T cell; subpopulation; medicament; treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               prevention; production; antigen; immunogen; tolerogen; reinjection; inactivation.
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                                                                                                                                                                                                                           Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Glutamine decarboxylase peptide(s)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-OCT-1997
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pryfnglstg 10
                             PRYFNQLSTG 20
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/an Endert P;
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                                                                                                                            100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20 AA
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                                                                                                                         Score 55; Pred. No.
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                                                                                                 Mismatches
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0.0033;
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0.0033;
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                                                                                                                                                 Length 20;
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RESULT RE
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     Query Match
Best Local S
Matches 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (ENDL/)
insulin-dependent diabetes mellitus; IDDM; cell predisposition; autoimmune; tumour; rheumatoid multiple sclerosis.
                                                                                                                                                                                 05-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Antigen-specific activated T-lymphocytes and their detection interaction with inventive peptide(s) of peptide-MHC complexes; useful in diagnosis of e.g. diabetes and auto:immune diseases
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                                                                                GAD; 65 kD;
                                                                                                                              65 kD Glutamic acid decarboxylase peptide fragment 16
                                                                                                                                                                                                                                    W18865;
                                                                                                                                                                                                                                                                                        W18865 standard;
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20-JAN-1994;
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1 ryfnqlstg 9
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9; Conserv
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BOEHRINGER MANNHEIM GMBH.
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                                                   human; glutamic acid decarboxylase; autoreactive; diagnosis; endent diabetes mellitus; IDDM; cell-mediated disease;
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                                                                                                                                                                                 (first entry)
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                                                                                                                                                                                                                                                                                        peptide; 14
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100.08;
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Pred. No.
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0.036;
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arthritis;

DE19526561-A1 Synthetic.

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W12405
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Best Local S
Matches 9
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                                                                                                                                                                                                                                                                                                                                                                                       65 kD glutamic acid decarboxylase; human; GAD65; neuron; central nervous system; type I diabetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAD65 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-OCT-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Skin test for diagnosis of cell-mediated diseases, esp. diabetes involving intradermal admin. of auto:reactive substances
                      24-JUN-1996;
                                                                       09-JAN-1997.
                                                                                                                                                                                                                                  Misc-difference
                                                                                                                                                                                                                                                                                                                Homo sapiens.
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Pozzilli P,
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                                                                                                                                                                                                                                                                                                                                                                    cell; therapy.
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9; Conser
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                      96WO-US10790
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                                                                                                                                                                           "optionally substituted, providing at residues remain wild type"
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0.036;
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RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      w12403-w12413 represent fragments and analogues of the the 65 kD isoform of human glutamic acid decarboxylase (CAD65) (see W12402 for full length wild type protein). GAD is an enzyme expressed in the beta cells of the pancreas, and in neurons of the central nervous system. There are two isoforms of GAD, a 67 kD isoform, and GAD65. Immunodominant regions of GAD65 have been identified in Type I diabetic patients. These GAD65 fragments, and analogues, are used in the methods of the invention. The methods are for detecting or treating diabetes or a predisposition to diabetes. The peptides can also be used for ameliorating an autoimmune response in a patient. Alteration of the native peptides with selective changes of crucial residues can induce unresponsiveness or change the responsiveness of antigen-specific autoreactive T cells. The peptide analogues compete for binding to MHC and do not cause proliferation of the corresponding native peptide-specific T cells.
          19-DEC-1997;
18-DEC-1997;
18-DEC-1997;
18-DEC-1997;
                                                                                                                                                                                                                    Human; secreted protein; cancer; tumour; developmental abnormality; foetal deficiency; blood disorder; immune system disorder; inflammati autoimmune disease; allergy; Alzheimer's disease; cognitive disorder; schizophrenia; arthritis; asthma; psoriasis; sepsis; skin disorder; atherosclerosis; diabetes; cardiovascular disorder; kidney disorder;
                                                                                                                                                                                                                                                                                                              Fragment of human secreted protein encoded by gene 39.
                                                                                                                                                                                                                                                                                                                                              17-SEP-1999
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(NEUR-)
(SBAR-)
                                                                                                                                               WO9931117-A1
                                                                                                                                                                             Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New human glutamic acid decarboxylase peptide(s) - used for treatment, diagnosis and determining predisposition to diabetes and for ameliorating auto-immune responses.
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                                                                                       17-DEC-1998;
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                                                                                                                                                                                                          digestive
                                                                                                                                                                                                                                                                                                                                                                                                       Y36566 standard; Protein; 24 AA
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NEUROCRINE BIOSCIENCES INC.
ST BARTHOLOMEW'S HOSPITAL CENT CLINICAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page -;
                                                                                                                                                                                                          disorder;
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97US-0068006
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                                                                                                                                                                                                          endocrine disorder;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 18;
0.039;
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                                                                                                                                                                                                                                                                      inflammation;
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L8-DEC-1997

97US-0068007 97US-0068008

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RESULT
R49436
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CC x97916 to x98029 represent 110 isolated human secreted protein genes.
CC x96224 to x36727 represent the secreted proteins encoded by the 110
CC human genes. The genes and their corresponding secreted polypeptides are useful for preventing, treating or ameliorating medical conditions.
CC e.g. by protein or gene therapy. Also pathological conditions can be CC diagnosed by determining the amount of the new polypeptides in a sample CC or by determining the presence of mutations in the new genes. Specific CC are most highly expressed in, and include developing products for the CC diagnosis or treatment of cancer, tumours, developmental abnormalities autoimmune diseases, inflammation, allergies, based on which tissues they CC and foetal deficiencies, blood disorders, diseases of the immune system, CC disorders, schizophrenia, arthritis, asthma, psoriasis, sepsis, skin CC disorders, diseases, inflammation, allergies, positasis, sepsis, skin CC disorders, diseases, inflammation, allergies, hostodist, schizophrenia, arthritis, asthma, psoriasis, sepsis, skin CC disorders, disease are also useful for identifying their binding partners. The polypeptides are also useful for identifying their binding partners. CC The sequences given in x97907 to x97915 and Y3623 are used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 6; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-DEC-1997;
18-DEC-1997;
18-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Florence K,
                                                                                      Maturally-occuring; immunomodulatory protein; human; therapy; class I; major histocompatibility complex; class II; allotype; type I diabetes; autoimmune disease; rheumatoid arthritis; T-cell-mediated response; mutiple sclerosis; transplant rejection; vaccine; MHC.
                                                                                                                                                                    Calgranulin B position 43/88-114.
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19-DEC-1997;
19-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yu G;
03-MAR-1994
                              W09404171-A.
                                                            Homo sapiens
                                                                                                                                                                                                     16-SEP-1994
                                                                                                                                                                                                                                                                 R49436 standard; Protein; 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New isolated human genes encoding secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Carter KC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HUMA-) HUMAN GENOME SCI INC
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                                                                                                                                                                                                                                                                                                                                                                           8 TGHPRYFNQLSTG 20
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ce K, Greene JM, Ja
Rosen CA, Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24
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                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97US-0068054.
97US-0068064.
97US-0068064.
97US-0070923.
97US-0068169.
97US-0068367.
97US-0068368.
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                                                                                                                                                                                                                                                                                                                                                                                                                        31.5%;
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M, Janat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  537pp; English
                                                                                                                                                                                                                                                                                                                                                                                                        Score 34; DB
Pred. No. 19;
2; Mismatches
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Shi Y, Soppe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kyaw H, Moon
, Soppet DR,
                                                                                                                                                                                                                                                                                                                                                                                                                     . 19;
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                                                                                                                                                                                                                                                                                                                                                                                                                                     20;
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                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 24;
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Wei Y;
                                                                                                                                                                                                                                                                                                                                                                                                          Indels
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Best Local Similarity
Matches 6; Conser
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Vignali DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fragments of naturally-occuring immunomodulatory proteins. These fragments are between 10-30 residues in length and bind to a human major histocompatibility complex (MHC) class II allotype. These peptides may be used for therapy of autoimmune diseases, such as type I diabetes, rheumatoid arthritis and mutiple sclerosis, and to reduce transplant rejection. They may also be used for vaccination providing an exclusively T-cell-mediated response, which can be class I or class-II based, or both, depending on the length and character of the immunogenic peptides.
           Chicz RM,
Vignali DA;
                                                                                                                                                                                                             major histocompatibility complex; class II; allotype; type I diabet autoimmune disease; rheumatoid arthritis; T-cell-mediated response;
                                                                                                                                                                                                                            Naturally-occuring; immunomodulatory protein; human; therapy; class I;
major histocompatibility complex; class II; allotype; type I diabetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-AUG-1993;
                                                                      11-AUG-1992;
15-JUN-1993;
                                                                                                                                03-MAR-1994
                                                                                                                                                       WO9404171-A
                                                                                                                                                                                                     mutiple sclerosis;
                                                                                                                                                                                                                                                               Calgranulin B position 42/88-114.
                                                                                                                                                                                                                                                                                                             R49435;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The sequences given in R49291-505 and R46981-7038 represent peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel immunomodulatory peptide(s) a treatment of auto:immune diseases,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-AUG-1992;
15-JUN-1993;
                                                                                                         11-AUG-1993;
                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                   R49435 standard; Protein; 24 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 92; 139pp; English.
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                                               (HARD ) HARVARD COLLEGE
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                                                                                                                                                                                                                                                                                                                                                                                                                    KTGHPRYFNQ 16
                       Hedley ML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hedley ML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14 AA;
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                                                                                                                                                                                                                                                                                     (first entry)
                                                                     92US-0925460.
93US-0925460.
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93US-0925460.
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                        Stern
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Pred.
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                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
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                       Strominger JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Strominger JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                        32;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15;
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                          Urban
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1994-082825/10

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RESULT 16
Y91936
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The sequences given in R49291-505 and R46981-7038 represent peptide fragments of naturally-occuring immunomodulatory proteins. These fragments are between 10-30 residues in length and bind to a human major histocompatibility complex (MHC) class II allotype. These peptides may be used for therapy of autoimmune diseases, such as type I diabetes, rheumatoid arthritis and mutiple sclerosis, and to reduce transplant rejection. They may also be used for vaccination providing an exclusively T-cell-mediated response, which can be class I or class-II based, or both, depending on the length and
                                                                                      Phosphorylating a serine-containing substrate by incubating it with adenosine triphosphate and Rec2 kinase and measuring the level of phosphorylation, useful for discovering specific antagonists or
                                                                                                                                     WPI;
                                                                                                                                                                                             (UYJE-)
                                                      Example
                                                                             phosphorylation,
agonists of Rec2
                                                                                                                                                            Havre PA,
                                                                                                                                                                                (KIME-)
                                                                                                                                                                                                                              21-SEP-1998;
                                                                                                                                                                                                                                                   17-SEP-1999;
                                                                                                                                                                                                                                                                          30-MAR-2000
                                                                                                                                                                                                                                                                                               WO200017329-A1
                                                                                                                                                                                                                                                                                                                                            phosphorylation;
                                                                                                                                                                                                                                                                                                                                                        HsRec2;
                                                                                                                                                                                                                                                                                                                                                                             HsRec2 peptide
                                                                                                                                                                                                                                                                                                                                                                                                    19-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                          Y91936;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Y91936 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 92; 139pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel immunomodulatory peptide(s) and nucleic acids - useful for treatment of auto:immune diseases, transplant rejection and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 klghpdtlng 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7 KTGHPRYFNQ 16
                                                      ω
                                                                                                                                                                                 KIMERAGEN
                                                                                                                                                                                            UNIV JEFFERSON THOMAS CORNELL RES FOUND INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 6; Conserv
                                                                                                                                                                                                                                                                                                                                                        serine kinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 얁
                                                                                                                                                           Rice MC,
                                                      Page 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the immunogenic peptides.
                                                                                                                                                                                                                                                                                                                                                                            residues 153-172.
                                                                                                                                                                                                                            9805-0157603.
                                                                                                                                                                                                                                                    99WO-US21642
                                                                                                                                                                                                                                                                                                                                             cyclin E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptide;
                                                                                                                                                                                   INC:
                                                    41pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29.6%;
                                                                                                                                                            Holloman
                                                                                                                                                                                                                                                                                                                                            homologous pairing; strand transfer; n E; p53; cell cycle; substrate.
                                                      English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                20 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 32;
Pred. No.
                                                                                                                                                           WK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB
43;
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                                                                                                                                                                                                                                                                                                                                                        RAD51;
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The present sequence is hsRec2 peptide, residues 153-172, a substrate which was not phosphorylated by hsRec2, a human serine kinase. HsReci is in the same supergene family as the mammmalian protein having homologous pairing and strand transfer activities, RAD51 and was

HsRec2

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Y57311
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Fighter Strong St
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The invention provides an alkaline ceramidase from P. aeruginosa. Ceramidase can be produced by standard recombinant methodology. Ceramidase converts ceramide to sphingosine and a fatty acid, causes, or exacerbates, atopic dermatitis. The ceramidase gene, polypeptide, derived oligonucleotides and ceramidase-specific antibodies are used to prevent and/or treat atopic dermatitis. The gene and the polypeptide can be used as reagents for lipid engineering and for analyzing the structure and activity of ceramides. Sequences Y57308-313 represent partial fragments of the ceramidase protein, used for designing primers for amplifying the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of phosphorylation. The method is useful for are specific antagonists or agonists of Rec2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Okino N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Misc-difference
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lipid engin
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                                                                                                                                                                                                                                                                                                    Example 1;
                                                                                                                                                                                                                                                                                                                                                              diagnosis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-258590/23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-AUG-1999;
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                                                                                                                                                                                                                                                                                                                                                                                          New Pseudomonas aeruginosa alkaline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TAKI ) TAKARA SHUZO CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-AUG-1998;
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                                                                                                                                                                                                                                                                                                    Page 21;
                                                                                                                                                                                                                                                                                                                                                              treatment and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13
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sering; antidermatitis.
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                                                                                                                                                                                                                                                                                                 32pp; English.
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                                                                                                                                                                                                                                                                                                                                                           prevention
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Kuchler
                                                                                            is any
R43131.
                                                                                                  Inhibitors of rhinoviral HRV2 2A proteinase, are derived from the natural cleavage sequence given in R43119, comprising 10-16 amino acid residues and have the amino acid pattern RXXI/LXTXGP (where x is any amino acid residue). Such inhibitors are given in R43120-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                           Sequence
                                                                                                                                            Claim 21; Fig
                                                                                                                                                            Analysis of host cell shut-offs caused by picornaviruses inhibitor of rhinoviral HRV2 2A proteinase
                                                                                                                                                                                      WPI; 1993-322123/41.
                                                                                                                                                                                                                                                        04-MAR-1992;
30-MAY-1992;
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                                                                                                                                                                                                                                                                                                                                  Cleavage-site
                                                                                                                                                                                                                                                                                                                                                           Synthetic
                                                                                                                                                                                                                                                                                                                                                                            host cell shut-off;
                                                                                                                                                                                                                                                                                                                                                                                    Human rhinovirus;
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                                                                                                                                           23; 88pp;
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92DE-4217929.
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                                                                                                                                                                                                                                                                                                                                                                           HRV; infection; cleavage site;
f; picornavirus; proteinase.
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                                                                                                                                                                                                                                                                                                                                                                                                    proteinase inhibitor MMP-1.
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                                Score 30; DB
Pred. No. 59;
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Pred. No.
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F, Sommergruber W, Stadler
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ced. No. 38;
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with disturbance of alpha-helical structures) have few if any toxic effects, and those that

means that the peptides include D-aa will have

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resistance to

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This sequence represents a diastereomer peptide of the invention. The peptides of the invention have: (a) cytolytic activity opathogenic cells (pathogens and malignant cells not naturally present in the body); but (b) no haemolytic activity, or such activity only at a concentration significantly higher than that at which they lyse pathogens. The peptides, their complexes and mixtures are used to treat infections (caused by bacteria, fungi, protozoa, mycoplasma or viruses) or cancer, in human and veterinary medicine. Also, they can be used as preservatives for food, cosmetics and agricultural produce, or as agricultural pesticides. The absence of haemolytic activity (associated agricultural pesticides. The absence of haemolytic activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Diastereomer peptide; infection; therapy; excitatory neurotoxin; Honey bee venom; pardaxin; cytolytic activity; cancer; non-haemolytic; preservative; agricultural produce; bacterial ce agricultural pesticide; cell wall lysis.
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                                                                                                                                                            Example
                                                                                                                                                                                           Peptide(s) having selective cytolytic activity - against pathogens and mailgnant cells, but no haemolytic activity, used for treating
                                                                                                                                                                                                                             WPI; 1997-435088/40
                                                                                                                                                                                                                                                   Oren Z,
                                                                                                                                                                                                                                                                                                22-FEB-1996;
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       Peptide(s) having selective cytolytic activity -
and malignant cells, but no haemolytic activity,
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                                                                                                                                                                                                                                                                                                                                                                                                                   Diastereomer peptide; infection; therapy; excitatory neurotoxin;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Diastereomer peptide 71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W35210 standard; peptide; 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cytotoxic random copolymers of pardaxin, each has a specific spectrum of activity, allowing selection of agents for particular applications. Since these random copolymers induce total lysis of bacterial cell walls, resistance to them is unlikely to develop.
                                   WPI; 1997-435088/40.
                                                                       (YEDA ) YEDA RES
                                                                                          22-FEB-1996;
                                                                                                           20-FEB-1997;
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infections and cancer
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       against pathogens
used for treating
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
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                                                                                                  New non-haemolytic cytolytic agent useful in treating cancer infections - is a peptide comprising a moiety which disrupts continuity of an alpha-helical structure
                                                                                                                                                                                                                                                                                                                                                                                                          Non-haemolytic; cytolytic; selective cytolytic activity; cancer; infection; disinfectant; contact lens wetting sol preservative; pesticide; fungicide; bactericide.
                                                                                                                                                                WPI; 1998-594464/50.
                                                                                                                                                                                               Oren
                                                                                                                                                                                                                                                                                        19-FEB-1998;
                                                                                                                                                                                                                                                                                                                    27-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Antipathogenic peptide
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                                                                       Page 46; 126pp;
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The present peptide is used to produce the agents of the invention. The specification describes a non-haemolytic, cytolytic agent, which is a peptide, a complex of bundled peptides, a mixture of peptides or a random peptide copolymer. The agent has a selective cytolytic activity on

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Matches 4
            The present peptide is used to produce the agents of the invention. The specification describes a non-haemolytic, cytolytic agent, which is a peptide, a complex of bundled peptides, a mixture of peptides or a rando peptide copolymer. The agent has a selective cytolytic activity on pathogenic cells. The agent is selected from a cyclic derivative of a peptide which has a net positive charge greater than 1, comprises L-amin acid residues and/or D-amino acid residues and comprises an alpha helix breaker moiety, or a peptide (or cyclic derivative of this) which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               breaker molety, or a peptide (or cyclic derivative of this) which (comprises L-amino acid residues and D-amino acid residues, has a net positive charge greater than 1 and has an amino acid sequence such that a corresponding amino acid sequence comprising only L-amino acid residues is not found in nature. The cytolytic agents may be used for treatment of several diseases caused by pathogens, including bacterial, fungal, viral, mycoplasma and protozoan infections. They may be used in both human and veterinary medicine. They may also be used as disinfectants for destruction of microorganisms, i.e. in solutions for wetting contact lenses, as preservatives, e.g., in the cosmetic and food industries, as pesticides (e.g. fungicides or bactericides) or for preservation of agricultural products.
                                                                                                                                                                                                          New non-haemolytic cytolytic agent useful in treating cancer infections - is a peptide comprising a moiety which disrupts continuity of an alpha-helical structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Non-haemolytic; cytolytic; selective cytolytic activity; pathogen; cancer; infection; disinfectant; contact lens wetting solution; preservative; pesticide; fungicide; bactericide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pathogenic cells. The agent is selected from a cyclic derivative of a peptide which has a net positive charge greater than 1, comprises L-aminacid residues and/or D-amino acid residues and comprises an alpha-helix
                                                                                                                                                                                                                                                                                                                                                   (YEDA ) YEDA RES & DEV CO LTD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Antipathogenic
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residues and D-amino acid
                                                                                                                                                                       English.
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Pred. No.
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residues, has a net
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    positive charge greater than 1 and has an amino acid sequence such that a corresponding amino acid sequence comprising only L-amino acid residues is not found in nature. The cytolytic agents may be used for treatment of cancer or for treatment of several diseases caused by pathogens, including bacterial, fungal, viral, mycoplasma and protozoan infections. They may be used in both human and veterinary medicine. They may also be used as disinfectants for destruction of microorganisms, i.e. in solutions for wetting contact lenses, as preservatives, e.g., in the cosmetic and food industries, as pesticides (e.g. fungicides or bactericides) or for preservation of agricultural products.
                                                                                                                                                                                                                                                                                                                                                                                                                                           Dictyostelium; DP1; discoidin II; human DP1; hDP1; cyclophilin; DdCyP2;
bisphosphonate binding protein; calcium metabolism; cyclosporine;
osteoporosis; hypercalcaemia; bone metabolism; bone metastases.
                                                                                                                                            Bisphosphonate binding protein - used disorders, including bone metabolism,
                                                                                                                               metastases, and osteoporosis
                                                                                                                                                                                                                                                                           14-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                      Dictyostelium discoideum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide 6 from D. discoideum DP1 protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W80790 standard; peptide; 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                WPI; 1998-506311/43
                                                                                                                                                                                                       Russell
                                                                                                                                                                                                                 Cook JS,
                                                                                                                                                                                                                                      (PROC ) PROCTER & GAMBLE CO.
(UYSH-) UNIV SHEFFIELD MED SCHOOL.
                                                                                                                                                                                                                                                                                                   13-FEB-1998;
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                                                                                                                                                                                                                                                                                                                                                                                  Misc-difference
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4; Conserv
                                                                                                                                                                                                      , Ebetino FH, RGGR, Watts 1
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                                                                                                                                                                                                     Ibbotson
אל, Xiong
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Pred.
2; Mis
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                                                                                                                                            to treat calciu hypercalcaemia,
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                                                                                                                                                                                                                 ×
                                                                                                                                                        treat calcium metabolism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19;
                                                                                                                                                                                                                  Rogers MJ
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Sequences shown in W80785 to W80793 represent peptides from DP1 produced by endoprotease digestion, used for peptide sequencing. The invention provides sequences encoding Dictyostelium DP1, human DP1 (hDP1) and Dictyostelium cyclophilin (DdCyP2) which are bisphosphonate binding proteins. The invention also provides methods for purifying and producing such bisphosphonate binding proteins. The bisphosphonate binding protein. or an antibody which binds to the binding protein can be used in the diagnosis of calcium metabolism disorders. They can also be used to treat

Example 1;

Page

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98pp;

English.

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                                                    Query Match
Best Local :
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Best Local
                                         Matches
                                                                                                                                                                                                       This sequence represents an immunogenic polypeptide of the invention, are is capable of inducing an immune response in vivo against a pathogenic microorganism. The peptides can be used for pharmaceutical compositions for in vivo protection against pathogenic microorganisms. Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        calcium metabolism disorders, where the treatment is for the reg of bone metabolism, hypercalcaemia, bone metastases, and osteopo especially by regulation of bone metabolism via interaction with
                                                                                                                                                 for in vivo protection against pathogenic microorganisms. Antibodies recognising the peptides are useful for diagnosing microorganism infections. The peptides induce a stronger protective immune response to pathogenic microorganisms compared to prior art peptides. Preparation is cheaper and less time is consumed than in preparation of polysaccharide
                                                                                                                                                                                                                                                                                                                                                                                     Cortese R, F
Sansonetti P;
                                                                                                                                                                                                                                                                                                                  New immunogenic polypeptide which induces an immune response in vivo useful for inducing a stronger protective immune response against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Immunogenic peptide; epitope unit; immune response; in vivo pathogenic microorganism; microorganism infection; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cyclosporine.
                                                                                                          Sequence
                                                                                                                                                                                                                                                                          Disclosure; Fig 5; 64pp; English.
                                                                                                                                                                                                                                                                                                     pathogenic microorganisms
                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-205131/17
                                                                                                                                                                                                                                                                                                                                                                                                                          (INRM ) INSERM INST NAT SANTE & RECH MEDICALE. (INSP ) INST PASTEUR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               03-SEP-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9911660-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bacterial immunogenic peptide clone 18c
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11 PRYFNOL | :||!:
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                                                                                                                                      carbohydrate antigens.
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                                                      Similarity
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                                         Conservative
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55.6%;
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57.18;
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                                       Score 29; DB Pred. No. 2.1e 2; Mismatches
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Best Local S
Matches 6
                                                                                                                                                                  This invention describes a method which uses the CCT (eukaryotic type II chaperconin) complex or part of it, for identifying a binding agent that can occupy a substrate-binding site (SBS) on the CCT complex. By binding to the CCT complex, the binding agents block an SBS so that biological activity of the CCT complex is affected, particularly its ability to fold substrates such as actin, tubulin and cyclin. The binding agents are useful for treatment of cancer, particularly when used in combination with an anticancer drug, or viral infections. Nucleic acid fragments are used to screen for agents, e.g. binding agents that modulate interaction between the CCT complex and a protein that is to be folded. The binding agents may target cells that are actively synthesising tubulin etc. (unlike known microtubule-stabilising agents that affect all cells), so should have reduced toxicity for normal cells. W92550-W92628 are
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Identifying specific binding agents for substrate binding site in CCT chaperonin complex - also new peptide binding agents and their mimetics, and peptides containing a specific CCT binding site, used
                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide substrate; CCT; eukaryotic type II chaperonin complex; cyclin; binding agent; substrate-binding site; SBS; substrate folding; actin; tubulin; treatment; cancer; anticancer drug; viral infection; screenin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mouse beta-actin array peptide substrate #9
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                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure;
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                              1 TLKYAIKTG 9
tlkypiehg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Liou AK,
                                                                                                                                         15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                        Page 87; 97pp; English.
                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98WO-GB01485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    peptide;
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                                                                            26.9%;
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                                                            Score 29; DB
Pred. No. 82;
1; Mismatches
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Search completed: February Job time: 627 sec

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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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Perfect score:
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1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
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Match Length
    195891 seqs, 67900655 residues
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109
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pir4:*
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pir2:*
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S18070

149414

S69502

S69502

S169702

S12058

JC2058

JC205
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PS0276
S70348
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23.147 Million cell updates/sec
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hypothetical prote
Ig heavy chain CRD
UDPglucose--glycog
photosystem I 8.0K
39k major outer me
heterodisulfide re
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allatostatin - tob
multicatalytic end
TCR delta chain V-
multicatalytic end
exo-poly-alpha-gal
amidase (EC 3.5.1)
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photosystem I 8.0K
                                                                                                                                                                                                                                                                                                                                                                      homeobox 3 protein
homeobox 4 protein
coumarin 7-monooxy
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NFI/CAAT-binding t
cytochrome P450.CM
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protein kinase C i
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alpha-2u-globulin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene HEXA protein - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 29-May-1998 #sequence_revision 29-May-1998 #text_change 21-Jul-2000
C;Accession: I64828
R;Boles, D.J.; Proia, R.L.
An. J. Hum. Genet. 56, 716-724, 1995
A;Title: The molecular basis of HEXA mRNA deficiency caused by the most common Tay-Sa
A;Reference number: I51882; MUID:95193801
A;Accession: I64828
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164828
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GB:S76982; NID:g912780; PIDN:AAD14242.1; PID:g4261942

### ALIGNMENTS

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                                                                                                                                                                                                                                                                                                  phosphoribulokinase (EC 2.7.1.19) - rice (strain Nihonbare) (fragment)
C;Speckes: Oryza sativa (rice)
C;Deckes: Oryza sativa (rice)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 23-Mar-1995
C;Accession: PS0276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Gene: GDB:HEXA
A;Cross-references: GDB:120040; OMIM:272800
A;Map position: 15q23-15q24
C;Superfamily: beta-hexosaminidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: mRNA A;Residues: 1-25 <RES> A;Cross-references: GB:S75982; NID:g912780; PIDN:AAI C:Genetics:
                                                                                                                                                        A;Molecule type: protein
A;Residues: 1-15 <TSU>
A;Experimental source: leaf, chlorophyll,
                                                                                                                                                                                                                   submitted to JIPID, April 1993
A; Reference number: PS0206
A; Accession: PS0276
                                                                                                                                       C; Keywords: phosphotransferase
                                     Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 28.4%;
Best Local Similarity 50.0%;
Matches 6; Conservative
  13 MVGLAAD 19
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| | |::| | |
1 PWYLNRISYGPD 12
                                         Conservative
                                                            25.7%;
                                         2; Mismatches
                                                          Score 28; D
Pred. No. 2.
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                                                            DB 2;
2.1e+02;
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                                                                             Length 15;
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Biochim. Biophys. Acta 1290, 129-134, 1996
A;Title: Purification and identification of allergenic alpha(2u)-globulin species A;Reference number: S70347; MUID:96254071
A;Accession: S70348
A;Status: preliminary
A;Molecule type. ----
N;Alternate names: probable lipocortin
C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep) **
C:Date: 19-Mar-1997 #sequence_revision 13-Sep-1998 #text_change 13-Sep-1998
C:Accession: $10807
R;Toker, A.; Ellis, C.A.; Sellers, L.A.; Aitken, A.
Eur. J. Biochem. 191, 421-429, 1990
A;Title: protein kinase C inhibitor proteins. Purification from sheep brain and *A;Reference number: $10804; MUID:90345949
A;Accession: $10807
A;Molecule type: protein
A;Residues: 1-16 <TOK>
A;Experimental source: brain
C;Superfamily: 14-3-3 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            urinary tract stone matrix protein 10, 42K - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 12-Apr-1995 #sequence_revision 12-Apr-1995 #text_change 12-Apr-1995
C;Accession: H56046
R;Binette, J.P.; Binette, M.B.; Gawinowicz, M.A.; Kendrick, N.
submitted to the Protein Sequence Database, February 1995
A;Description: Isolation, characterization and sequence of stone proteins.
A;Reference number: A56046
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-13 <BIN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Watches 5; Conserve
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A;Residues: 1-25 <BAY>
C;Superfamily: lipocalin; lipocalin homology
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C;Date: 19-Mar-1998 #sequence_revision 17-Apr-1998 #text_change 17-Mar-1999
C:Accession: S70348
R;Bayard, C.; Holmquist, L.; Vesterberg, O.
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$70348
$1pha-2u-globulin - rat (fragment)
RiAlternate names: alpha-2-euglobulin; major urinary protein
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Matches 5
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Pred. No. 2
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Pred. No. 3.6e+02;
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2.6e+02;
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cytochrome P450 CMLb (EC 1.14...) - crab-eating macaque (fragment) C; Species: Macaca fascicularis (crab-eating macaque) C; Date: 09-Jun-1994 #sequence_revision 07-Nov-1997 #text_change 05-1 C; Accession: S36874 R; Ohmori, S.; Horie, T.; Guengerich, F.P.; Kluchi, M.: Kitada. M.
                                                                                          RESULT
S36874
                                                                                                                                                                                                                                                                                                                                                                                                                           gene CTLA-1 protein - western wild mouse (fragment)
C;Species: Mus spretus (Western wild mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 22-Jun-1999
C;Accession: 149414
R;KO, M.S.; Wang, X.; Horton, J.H.; Hagen, M.D.; Takahashi, N.; Maezaki, Y.;
Mamm. Genome 5, 349-355, 1994
                                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 1-21 <WEN>
A;Cross-references: EMBL:X92857
A;Note: the nucleotide sequence was submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Gene: CTLA-1
C;Superfamily: trypsin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: DNA
A;Residues: 1-21 <RES>
A;Cross-references: EMBL:U05708; NID:g497037; PIDN:AAB60471.1; PID:g497038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Genetic mapping of 40 cDNA clones on the m
A;Reference number: 148934; MUID:94319082
A;Accession: 149414
A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
I49414
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                                                                                                                                                                                                                                                                                                                                                                                                              A; Reference number: A; Accession: $69502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NFI/CAAT-binding transcription factor 5 (CTF5) - human (fragment)
C; Species: Homo sapiens (man)
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Best Local Similarity
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; Pred. No. 6.4e
1; Mismatches
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Pred. No. 6.4e+02;
4; Mismatches 5;
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Pred. No. 3.
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6.4e+02;
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                                        #text_change 05-Mar-1999
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Same State State Section

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                 RESULT
JC2059
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JC2058
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A; Title: Purification and partial characterization
A; Reference number: A49226; MUID: 93114910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              major outer membrane protein - Haemophilus somnus (fragment) C;Species: Haemophilus somnus C;Deceley3 #sequence_revision 18-Nov-1994 #text_charC;Date: 19-Dec-1993 #sequence_revision 18-Nov-1994 #text_charC;Accession: A49226
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A; Title: Identification of c
A; Reference number: JC2057;
A; Accession: JC2058
                                                                                                                                                                                                                                                                                                                                 homeobox 3 protein - common tobacco (fragment)
C;Species: Nicotiana tabacum (common tobacco)
C;Date: 30-Sep-1993 #sequence_revision 20-Aug-1994 #text_change 20-Aug-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
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A; Title: Purification
                                                                                                                                                                                                                                                                                                          R; Feng, X.H.; Kung, S.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Note:
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homeobox 4 protein -
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Matches 6; Conserv
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common tobacco (fragment)
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Pred. No. 7e+(
3; Mismatches
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Pred. No.
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Pred. No. 5.6e+02;
3; Mismatches 3;
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7e+02;
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C;Species: Nicotiana tabacum (common tobacco)
-C;Date: 30-Sep-1993 #sequence_revision 20-Aug-1994 #text_change 23-Mar-1995
-C;Accession: JC2059
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521737

Coumarin 7-monooxygenase (EC 1.14.14.-) cytochrome P450 2A7

R;Alternate names: coumarin 7-hydroxylase

C;Species: Papio papio (western baboon)

C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_cha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R; Feng, X.H.; Kung, S.D.
Biochem. Biophys. Res. Commun. 198, 1012-1019, 1994
A; Title: Identification of differentially expressed
A; Reference number: JC2057; MUID:94161708
A; Accession: JC2059
A; Molecule type: DNA
A; Residues: 1-20 <BED: X07540;
A; Cross references: EMBL: X07540;
A; Note: the authors translated th
                                                                             R; Bernards, A.; Paskind, M.; Baltimore, D. Oncogene 2, 297-304, 1988
A; Title: Four murine c-abl mRNAs arise by A; Reference number: S00771; MUID:88202920
A; Accession: S00774
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C; Keywords:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Superfamily: human cytochrome P450 CYP2D6; cytochrome P450 homology
C;Reywords: heme; microsome; monooxygenase; oxidoreductase; transmemb
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A; Residues: 1-20
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Eur. J. Biochem. 204, 641-648, 1992
A;Title: Purification of two cytochrome P450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-19 <FEN>
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70.0%;
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the codon GAC
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Pred. No. 8.5e+02;
""'ematches 0;
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Pred. No. 9e+02;
3; Mismatches
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      PIDN:CAA30413.1; PID:g49836 for residue 12 as His
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Superfamily:

human

protein-tyrosine kinase abl;

protein kinase homology; SH2 homolo

C; Keywords: alternative splicing; ATP;

phosphotransferase

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C; Genetics: A; Gene: 9.5 C; Function:
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A;Title: Neuron-specific protein gene product 9.5 (PGP 9.5) is also expressed A;Reference number: S17561; MUID:92008646
A;Accession: S17561
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A:Title: Molecular heterogeneity of photosystem I. psaD, psaE, psaF A; Reference number: PQ0667; MUID:94105345
A; Accession: PQ0690
A; Accession: PQ0690
A; Molecule type: protein
A; Molecule type: protein
A; Residues: 1-23 COBO'
C; Superfamily: photosystem I chain V
C; Keywords: chloroplast; photosynthesis; photosystem I; thylakoid
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RESULT
PT0088
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C;Date: 19-Mar-1997 #sequence_revision 13-Sep-1998 #text_change 11-Jan-2000
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C; Species: Nicotiana tabacum (common tobacco)
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Pred. No. 1.1e+03;
3; Mismatches 7
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pred. No. 9e+02;
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allatostatin - tobacco hornworm C;Species: Manduca sexta (tobacco hornworm) C;Species: Manduca sexta (tobacco hornworm) C;Date: 21-Jul-1995 #sequence_revision 21-Jul-1995 #text_change 11-Jul-1997 C;Accession: A61612
R;Kramer, S.J.; Toschi, A.; Miller, C.A.; Kataoka, H.; Quistad, G.B.; Li, J. Proc. Natl. Acad. Sci. U.S.A. 88, 9458-9462, 1991
A;Title: Identification of an allatostatin from the tobacco hornworm Manduca A;Reference number: A61612; MUID:92052112
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submitted to JIPID, I
A;Reference number: F
A;Accession: PT0088
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Am. J. Hum. Genet. 56, 716-724, 1995
Am. J. Hum. Genet. 56, 716-724, 1995
A;Title: The molecular basis of HEXA mRNA deficienc
A;Title: The molecular basis of HEXA mRNA deficienc
A;Teference number: IS1882; MUID:95193801
A;Accession: I64829
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary;
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A;Residues: 1-25 <TOU>
C;Keywords: phosphoric triester hydrolase
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N;Alternate names: A-esterase; Aryltriphosphatase; Organophosphate hydrolas
C;Species: Rattus norvegicus (Norway rat)
C;Date: 07-Jul-1997 #sequence_revision 18-Jul-1997 #text_change 18-Jul-1997
C;Accession: PT0088
A;Molecule type: protein
A;Residues: 1-15 <KRA>
C;Keywords: neuropeptide; pyroglutamic acid
F;1/Modified site: pyrrolidone carboxylic ac
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A61612
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A;Cross-references: GDB:120040; OMIM:272800
A;Map position: 15q23-15q24
C;Superfamily: beta-hexosaminidase
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C;Species: Homo sapiens (man)
C;Date: 29-May-1998 #sequence_revisi
C;Accession: I68829
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A; Residues: 1-12 < RES>
                                                                                    A; Status: preliminary
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C:Accession: PC2320
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R;Kristensen, P.; Johnsen, A.H.; Uerkvitz, W.; Tanaka, K.; Hendil, K.B.
R;Kristensen, P.; Johnsen, A.H.; Uerkvitz, W.; Tanaka, K.; Hendil, K.B.
Ricchem. Biophys. Res. Commun. 205, 1785-1789, 1994
A;Title: Human proteasome subunits from 2-dimensional gels identified by partial sequence A;Reference number: PC2315; MUID:95110324
A;Accession: PC2320
A;Accession: PC2320
multicatalytic endopeptidase complex (EC 3.4.99.46) subunit 13 - bovine'(fr: C;Species: Bos primigenius taurus (cattle) C;Date: 04-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 26-May-2000 C;Accession: F42762 R;Dick, L.R.; Moomaw, C.R.; Pramanik, B.C.; DeMartino, G.N.; Slaughter, C.A Biochemistry 31, 7347-7355, 1992
                                                                                                               RESULT
F42762
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C:Species: Mus musculus (house mouse)
C:Date: 21-Jan-1994 #sequence_revision 18-Nov-1994 #text_change 05-Nov-1999
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C;Date: 21-Feb-1995 #sequence_revision 05-Apr-1995 #text_change 26-May-2000
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A; Residues: 1-18 <EZQ>
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exo-poly-alpha-galacturonosidase (EC 3.2.1.82) - Clostridium thermosaccharolyticum N;Alternate names: exo-poly-alpha-galacturonate hydrolase C;Species: Clostridium thermosaccharolyticum, Clostridium tartarivorum C;Date: 21-Jan-1994 #sequence_revision 18-Nov-1994 #text_change 06-Dec-1996 C;Accession: A48968
                                                                                                                                                  Gene 116, 99-104, 1992

A;Title: Cloning and primary structure of the wide-spectrum amidase from Brevibacteri A;Reference number: JC1174; MUID:92331957

A;Accession: PC1105
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A48968
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A; Accession: F42762
A; Status: prelimina:
                                                                                 A; Molecule type: mRNA
A; Residues: 1-25 <SOU>
C; Keywords: hydrolase
                                                                                                                                                                                                                           C; Accession R; Soubrier,
                                                                                                                                                                                                                                                            amidase (EC 3.5.1.4) - Brevibacterium sp. (fragment)
C;Species: Brevibacterium sp.
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 16-Jul-1999
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                                                                                                                                     A; Status: preliminary
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C;Species: Homo sapiens (man)
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 16-Aug-1996
C;Accession: PT0234
R;Yamada, M.; Wasserman, R.; Reichard, B.A.; Shane, S.; Caton, A.J.; Rovera, G.
J. Exp. Med. 173, 395-407, 1991
A;Title: Preferential utilization of specific immunoglobulin heavy chain diversity and A;Reference number: PT0222; MUID:91108337
A;Accession: PT0234
A;Molecule type: DNA
A;Residues: 1-17 < YANAY
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A;Residues: 1-17 <HUG>
A;Cross-references: GB:U56698; EMBL:X89725; NID:g1314836; PID:g1322246
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PT0234
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ribmitted to the EMBL Data Library, July 1995
ry.Description: The moss Ceratodon purpureus contains and expresses a second, conventionally.Reference number: S58129
ry.Reference ribminary
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Species: Ceratodon purpureus
Date: 13-3an-1996 #sequence_revision 01-Mar-1996 #text_change 31-Oct-1997
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PPHL_PSCZCA
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P25934 selenastrum
P08952 rana rugosa
P80742 biomphalari
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#### ALIGNMENTS

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Selenastrum minutum.  Eukaryota; Viridiplantae; Chlorophyta; Trebouxiophyceae; Chlorellales; Selenastraceae; Selenastrum.  [1]  SEQUENCE.  Lin M., Turpin D.H.;  Purification and molecular and immunological characterization of a unique phosphoribulokinase from the green alga Selenastrum minutum.";	01-MAY-1992 (Rel. 22, Created) 01-MAY-1992 (Rel. 22, Last sequence update) 01-MAY-1992 (Rel. 22, Last sequence update) 01-MAY-1992 (Rel. 22, Last annotation update) PHOSPHORIBULOKINASE, 41 KDA SUBUNIT (EC 2.7.1.19) (PHOSPHOPENTOKINASE) (FRAGMENT).	~ 1	6 VVGLAAD 12	13 MVGLAAD 19	es 6; Conservative 1	26.6%; Score 29;	SEQUENCE 14 AA; 1379 MW; C4B1D8CD2F891062 CRC64;	rase; Kinas	PROSITE; PS00567; PHOSPHORIBULOKINASE; PARTIAL.	ARITY: BELOI	HETERODIMER OF A 40 KDA AND A 41 KDA S	D-RIBULOSE 1,5-BISPHOSPHATE.	-1- CATALYTIC ACTIVITY: ATP + D-RIBULOSE 5-PHOSPHATE - ADP +	21	and immunological characterization of a	SEQUENCE.	Selenastraceae; Selenastrum. [1]			LOKINASE, 4	(Rel. 22, Last	. 22, Created)	RPP1_SELMI STANDARD; PRT; 14 AA.	SELMI

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Matches 5
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P80742;
01-OCT-2000 (
01-OCT-2000 (
01-OCT-2000 (
HEMOLYMPH 65
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01-NOV-1988
30-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rana rugosa (Frog).
Rana rugosa (Frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Eukaryota; Metazohia; Anura; Neobatrachia; Ranoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RANR_RANRU
P08952;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plant Physiol. 98:82-88(1992).

- CATALYTIC ACTIVITY: APP + D. PRIBULOSE 5-PHOSPHATE = ADP D-RIBULOSE 1,5-BISPHOSPHATE.

- PATHWAY: CALVIN CYCLE.

- SUBUNIT: HETERODIMER OF A 40 KDA AND A 41 KDA SUBUNIT.

- SIMILARTTY: BELONGS TO THE PHOSPHORIBULOKINASE FAMILY.

INTERPRO; IPR001324; ...
                                        Biomphalaria glabrata (Bloodfluke planorb).
Eukaryota; Metazoa; Mollusca; Gastropoda; Pulmonata;
Planorbidae; Biomphalaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RANRU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00257; BOMBESIN; Bombesin family; Amidation. MOD_RES 17 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished results, cited by:
Erspamer V., Erspamer G.F., Mazzanti G., Endean R.;
Erspamer Y., Erspamer G.F., Mazzanti G., Endean R.;
Comp. Biochem. Physiol. 77C:99-108(1984).
-i- SIMILARITY: BELONGS TO THE BOMBESIN/NEUROMEDIN B/RANATENSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Transferase; Kinase; NON_TER 15
SEQUENCE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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| ':|| :||
6 RRYNQWATG 14
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5; Conserv
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5; Conserv
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nilarity 71.4%;
Conservative
                                                                                                                                   (Rel. 40, Created)
(Rel. 40, Last sequence up
(Rel. 40, Last annotation
KDA LECTIN BG01 (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Rel. 09, Created)
(Rel. 09, Last sequence up
(Rel. 39, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                        STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2053 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 27; DB Pred. No. 1.9e 2; Mismatches
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1.9e+02;
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Ranidae; Rana
                                                                     Basommatophora;
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,PAPSP STANDARD; PRT; 20 AA.
P80055; 01-MAY-1992 (Rel. 22, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
CYTOCHROME P450 2A7 (EC 1.14.14.1) (CYPIIA7)
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NON_TER
NON_TER
SEQUENCE
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SEQUENCE
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"Purification of two cytochrome P450 isozymes related to CYP2A;
CYP3A gene families from monkey (baboon, Papio papio) liver
microsomes. Cross reactivity with human forms.";
Eur. J. Blochem. 204:641-648(1992).
I. FUNCTION. EXHIBITS A HIGH COUMARIN 7-HYDROXYLASE ACTIVITY.
I. CATALYTIC ACTIVITY: RH + REDUCED FLAVOPROTEIN + O(2) - ROH-
OXIDIZED FLAVOPROTEIN + H(2)O.
I. SUBCELLULAR LOCATION: MEMBRANE-BOUND. ENDOPLASMIC RETICULUM
I. INDUCTION: BELONGS TO THE CYTOCHROME P450 FAMILY.
PIR; S21737, S21737.
                                                                                                                                                                                                                                                                                                                                                                                                                    Papio sp. (Baboon).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
Cercopithecinae; Papio.
[1]
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MEDLINE-97385165; PubMed-9238039;
Adema C.M., Hertel L.A., Miller R.D., Loker E.S.;
Rafamily of fibrinogen-related proteins that precipitates parasite-derived molecules is produced by an invertebrate after infection.";
Proc. Natl. Acad. Sci. U.S.A. 94.8691-8696(1997).
-I- FUNCTION: BINDS AND PRECIPITATES ANTIGENS OF THE PARASITE
                                                                                                                                                          INTERPRO; IPR001128;
PROSITE; PS00086; CYTOCHROME_P450; PARTIAL.
Oxidoreductase; Monooxygenase; Electron transport;
Microsome; Endoplasmic reticulum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HYDROXYLASE) (FRAGMENT).
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MEDLINE=97385165;
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SUBCELLULAR LOCATION: SECRETED
                  LSTGLDMVGLAA 18
LASGLLLVALLA 13
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                                                  6; Conserv
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Similarity 38.5%;
5; Conservative
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7 AA;
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                                                                                                                       2045 MW;
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: Pred. No. 4.2e
3; Mismatches
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••
                                                    Score 25; DB 1; Le
Pred. No. 4.8e+02;
3; Mismatches 3;
                                                                                                                       693102A1F0B50C96 CRC64;
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Matches
                                                                                01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
ALLATOSTATIN (MAS-AS).
Manduca sexta (Tobacco hawkmoth) (Tobacco hornworm).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda;
Pterygota; Neoptera; Endopterygota; Lepidoptera; Glos
Sphingiodea; Sphingidae; Sphinginae; Manduca.
                                                                                                                                                                                                                       MANSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-1996 (Rel. 20, Last sequence update)
UBIQUITIN CARBOXYL-TERMINAL HYDROLASE ISOZYME L1 (EC
L1) (UBIQUITIN THIOLESTERASE L1) (NEURON CYTOPLASMIC
(PGP 9.5) (FRAGMENT).
 TISSUE-HEAD;
MEDLINE-92052112; PubMed-1946359;
Kramer S.J., Toschi A., Miller C.
Li J.P., Carney R.L., Schooley D.
"Identification of an allatostati
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIR; S1;
MEROPS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -I-FUNCTION: UBIQUITIN-PROTEIN HYDROLASE IS INVOLVED BOTH IN THE PROCESSING OF UBIQUITIN PRECURSORS AND OF UBIQUITATED PROTEINS. THIS ENZYME IS A THIOL PROTEASE THAT RECOGNIZE AND HYDROLYZE A PEPTIDE BOND AT THE C-TERMINAL GLYCINE OF UBIQUITIN.

-I- CATALYTIC ACTIVITY: UBIQUITIN C-TERMINAL THIOLESTER + H(2)O - UBIQUITIN + A THIOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Giambanco I., Bianchi R., Ceccarelli P., Pula G., Sorci G., Antonioli S., Bocchini V., Donato R.; "Neuron-specific' protein gene product 9.5 (PGP 9.5) is also expressed in glioma cell lines and its expression depends on orgrowth state."; FEBS Lett. 290:131-134(1991).
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BOAIN
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-i- TISSUE SPECIFICITY: NEURONS AND CELLS OF
NEUROENDOCKLINE SYSTEM AND THEIR TURORS.
-i- SIMILARITY: BELONGS TO PEPTIDASE FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota;
Mammalia; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-92008646;
                                                                 SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY: BELONGS TO PEPTIDASE FAMILY C12; ALSO I FAMILY 1 OF UBIQUITIN CARBOXYL-TERMINAL HYDROLASES
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5; Conser
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25 25
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y R.L., Schooley D.A n of an allator
                                                                                                                                                                                                        STANDARD;
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  allatostatin
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Pred.
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7;
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-1. FUNCTION: STRONGLY INHIBITS JUVENILE HORMONE BIC
BY THE CORPORA ALLATA FROM FIFTH-STADIUM LARVAE
-1- SIMILARITY: BELONGS TO THE ALLATOSTATIN FAMILY.
  SEQUENCE
                                                      Pseudomonas.
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01-JUN-1994 (Rel. 29, Last
15-JUL-1999 (Rel. 38, Last
ALKALINE PHOSPHATASE H (EC
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Chauvet J., Rouille
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Craniata; Vertebrata; Chondrichthyes;
Galeoidea; Carcharhiniformes;
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01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last seq)
15-JUL-1998 (Rel. 36, Last and
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01-FEB-1991 (Rel. 17, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
39 KDA MAJOR OUTER MEMBRANE PROTEIN (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kokeguchi S., Kato K., Nishimura F., Kurihara H., Murayama Y.; "Isolation and partial characterization of a 39 kDa major outer membrane protein of Actinobacillus actinomycetemcomitans Y4."; FEMS Microbiol. Lett. 61:85-89(1991). PIR: A54538; A54538.
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MEDLINE-93202452; PubMed~8454193;
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PROSITE; PS00123; ALKALINE_PHOSPHATASE;
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CATALYTIC ACTIVITY: AN ORTHOPHOSPHORIC MONOESTER +
ALCOHOL + ORTHOPHOSPHATE (AT A HIGH PH OPTIMUM).
COFACTOR: METALLOENZYME CONTAINING TWO ZINC ATOMS &
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and characterization of two
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20 AA;
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                                                                                                                            STANDARD; -
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28, Last sequence update)
36, Last annotation update)
(EC 2.7.4.3) (ATP-AMP TRANSPHOSPHORYLASE) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2316 MW;
                                                                                                                                                                                                                                                                                                                                                                   21.1%;
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40.
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Pred. No. 9.7e
2; Mismatches
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                                                                                                                                                                                                                                                                                                                                           Score 23; DB 1;
Pred. No. 1e+03;
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A837A8C4764F527E CRC64;
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9.7e+02;
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CCCCCRTA ARROCCOS DITION
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PGQ_XENLA
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Best Local Similarity
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P39080;
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-I- FUNCTION: THIS SMALL UBIQUITOUS

MAINTENANCE AND CELL GROWTH.

ACTIVITY: ATP + AMP -
MEDLINE=92011794; P
Moore K.S., Bevins
Eck H., Zasloff M.;
                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata;
Amphibia; Batrachia; Anura; Me
                                                                                                                                                                                                                                                                                                                                                                                            01-FEB-1995 (Rel. 31, Created)
01-FEB-1995 (Rel. 31, Last sequence up
01-FEB-1995 (Rel. 31, Last annotation
ANTIMICROBIAL PEPTIDE PGO.
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NON_TER
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Bacillus licheniformis.

Bacteria; Firmicutes; Bacillus/Clostridium group;

Bacillus/Staphylococcus group; Bacillus.
                                                                                                                                                                                                                                       TISSUE-STOMACH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; X70087; -; NOT_ANNOTATED_CDS. PIR; S34405; S34405.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            analysis of nine members of the Se
Mol. Gen. Genet. 235:147-152(1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Cloning and molecular characterization of the secy Bacillus licheniformis and Staphylococcus carnosus: analysis of nine members of the Secy family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-93062802;
Tschauder S., Drie
                                                                                                                                                                                                                                                               SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                             Xenopus laevis (African
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PFAM; PF00406; adenylatekinase; 1.
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                                                                                                                                                                                                                                                                                                        Kenopodinae;
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SIMILARITY: BELONGS TO THE ADENYLATE KINASE FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LDLMGL
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                                                                                                                                                                                                                                                                                                        Xenopus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PubMed=1435726;
                                                                                                                                                                                      PubMed=1717472;
s C.L., Brasseur M.M., Tomassini N.,
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                                                                                                                                                                                                                                                                                                                                                                             clawed frog).
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                                                                                                                                                                                                                                                                                                                                  Mesobatrachia;
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Pred. No. 1.2e
2; Mismatches
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                                                                                                                                                                                                                                                                                                                                                        Craniata;
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RESULT 13
CR21_LITSP
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Best Local
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Best Local
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                                                                                                                    P56234;
15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
CAERIN 2.2 [CONTAINS: CAERIN 2.2.1].
Litoria gilleni, and Litoria caerulea.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eumphibia; Batrachia; Anura; Neobatrachia; Bufonoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stone D.J.M., Waugh R.J., Bowie J.H., Wallace J.C., Tyler M.J.;
"Peptides from Australian frogs. Structures of the caerins and
caeridin i from Litoria splendida.";
J. Chem. Soc. Perkin Trans. 1:3173-3178(1992).
-!- FUNCTION: ANTIBACTERIAL PEPTIDE, THAT ADOPTS AN ALPHA HELICAL
CONFORMATION WHICH CAN DISRUPT BACTERIAL MEMBRANES. EACH CAER:
DISPLAYS A DIFFERENT ANTIMICROBIAL SPECIFICITY.
-!- TISSUE SPECIFICITY: SECRETED BY THE SKIN PAROTOID AND/OR ROSTI
SEQUENCE, AND MASS SPECTROMETRY OF CAERIN 2.2. SPECIES-L.CAERULEA; TISSUE-PAROTOID GLAND; Stone D.J.M., Waugh R.J., Bowie J.H., Wallace J.C., "Peptides from Australian frogs. The structures of Litoria caerula."; J. Chem. Res. 138:910-936(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Litoria splendida.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; El
Amphibia; Batrachia; Anura; Neobatrachia; Bufonoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Antibiotic;
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE, AND MASS SPECTROMETRY.
TISSUE-PAROTOID GLAND;
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                                                                                                           Litoria
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24 AA; 2457 MW;
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                                                                                                                                                                                                                                                 STANDARD;
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Last sequence
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Pred. No. 1.26
1; Mismatches
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Pred.
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No. 1.3e+03;
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1.2e+03;
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a; Hylidae;
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Best Local :
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PEPTIDE
PEPTIDE
                        MEDLINE-20063371; Pubmed-10601876;

Wabnitz P.A., Bowie J.H., Tyler M.J., Wallace J.C., Smith B.P.;

Wabnitz P.A., Bowie J.H., Tyler M.J., Wallace J.C., Smith B.P.;

Poliferences in the skin peptides of the male and female Australian tree frog Litoria spendida. The discovery of the aquatic male sex pheromone splendipherin, together with Phe8 caerulein and the antibiotic peptide caerin 1.20.";

Eur. J. Blochem. 267:269-275(2000).

-I- FUNCTION: ANTIBACTERIAL PEPTIDE, THAT ADOPTS AN ALPHA HELICAL CONFORMATION WHICH CAN DISRUPT BACTERIAL MEMBRANES. EACH CAERIN DISPLAYS A DIFFERENT ANTIMICROBIAL SPECIFICITY.

-I- FUNCTION: ACTS AS A MALE SEX PHEROMONE THAT ATTRACTS FEMALE.

-I- TISSUE SPECIFICITY: SECRETED BY THE SKIN PAROTOID AND/OR ROSTRAI
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P56235; P82
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"Peptides from Australian frogs. The structures of the caerins and caeridins from Literia gilleni."
J. Chem. Res. 139:937-961(1993).
--- FUNCTION: ANTIMICROBIAL PEPTIDE, THAT ADOPTS AN ALPHA HELICAL CONFORMATION WHICH CAN DISCUPT BACTERIAL MEMBRANES. EACH CAERIN DISCLAYS A DIFFERENT ANTIMICROBIAL SPECIFICITY.
--- TISSUE SPECIFICITY: SECRETED BY THE SKIN PAROTOID AND/OR ROSTRAI
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SEQUENCE, AND MASS SPECTROMETRY OF CAERIN 2.2.1.
SPECIES-L.GILLENI; TISSUE-PAROTOID GLAND;
SPECIES-T.GETON D.J.M., BOW16 J.H., Wallace J.
                                                                                                                                                                                                                                                SPECIES=L.SPLENDIDA; TISSUE=SKIN SECRETION; MEDLLNE=99447035; PubMed=10519546; Wabnitz P.A., Bowie J.H., Tyler M.J., Wallace J.C., "Aquatic sex pheromone from a male tree frog."; Nature 401:444-445(1999).
[3]
                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE, AND MASS SPECTROMETRY.
SPECIES-L.CAERULEA; TISSUE-PAROTOID GLAND;
Stone D.J.M., Waugh R.J., Bowie J.H., Wallace J
"Peptides from Australian frogs. The structures
Litoria caerula.";
                                                                                                                                                                                                                 SEQUENCE.
SPECIES-L.SPLENDIDA;
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15-JUL-1998 (Rel. 36,
01-OCT-2000 (Rel. 40,
SPLENDIPHERIN (CAERIN
                                                                                                                                                                                                                                                                                                                                        SEQUENCE.
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Litoria splendida.
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SPECTROMETRY: MW-1695;
ic; Amphibian skin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Batrachia; Anura; Neobatrachia; Bufonoidea; Hylidae;
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 MW=2364;
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Pred. No. 1.3e+03;
1; Mismatches 5
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CAERIN 2.2.1.
DDCA9BC5D49186B8
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METHOD=FAB;
 METHOD-FAB
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RANGE-9-25
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P56237;
15-JUL-1998
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CAERIN 2.5.
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CAERIN 2.4.
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P56236;
TISSUE-PAROTOID GLAND;
Waugh R.J., Stone D.J.M., Bowle J.H., Wallace J.C., Tyle
Waugh R.J., Stone D.J.M., Bowle J.H., Wallace J.C., Tyle
"Peptides from Litcoria gilleni.";
caeridins from Litcoria gilleni.";
J. Chem. Res. 139:937-961(1993).
-!- FUNCTION: ANTIBACTERIAL PEPTIDE, THAT ADOPTS AN ALPH
-CONFORMATION WHICH CAN DISRUPT BACTERIAL MEMBRANES.
DISPLAYS A DIFFERENT ANTIMICROBIAL SPECIFICITY.
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TISSUE-PAROTOID GLAND;
Stone D.J.M., Waugh R.J., Bowie J.H., Wallace J.C., Tyler M.J.;
Stone D.J.M., Waugh R.J., Bowie J.H., Wallace J.C., Tyler M.J.;

"Peptides from Australian frogs. The structures of the caerins from Litoria caerula.";

J. Chem. Res. 138:910-936(1993).

J. Chem. Res. 138:910-936(1993).

J. Chem. Res. 138:910-936(1993).

J. CHEM. THAT ADOPTS AN ALPHA HELICAL CONFORMATION WHICH CAN DISRUPT BACTERIAL MEMBRANES. EACH CAERIN DISPLAYS A DIFFERENT ANTIMICROBIAL SPECIFICITY.

JISSUE SPECIFICITY: SECRETED BY THE SKIN PAROTOID AND/OR ROSTRAL
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SEQUENCE
                                                                                                                SEQUENCE,
                                                                                                                                                       Eukaryota;
Amphibia; l
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Antibiotic; Amphibian skin.
SEQUENCE 25 AA; 2452 MW; DDD82C35D49596B8 CRC64;
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Amphibia; Batrachia; Anura; Neobatrachia; Bufonoidea; Hylidae;
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                                                                                                                AND MASS SPECTROMETRY
                                                                                                                                                     ; Metazoa; Chordata;
Batrachia; Anura; Ne
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25 AA; 2366 MW; DDD82C36B49186B8
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Neobatrachia; Bufonoidea; Hylidae;
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Pred. No.
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Best Local Similarity 50.0
Matches 6; Conservative
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P19628;
01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
01-FEB-1995 (Rel. 31, Last annotation update)
CARBOXYPEPTIDASE B (EC 3.4.17.2) (FRAGMENT).
Protopterus aethiopicus (Marbied lungiish).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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Reeck G.R., Neurath H.;
"Isolation and characterization of pancreatic procarboxypeptidase and carboxypeptidase B of the African lungfish.";
Biochemistry 11:3947-3955(1972).
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Antibiotic; Amphibian skin.
SEQUENCE 25 AA; 2450 MW;
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INTERPRO, IPRO00834; -.
PROSITE; PS00132; CARBOXYPEPT_ZN_1; PARTIAL.
PROSITE; PS00133; CARBOXYPEPT_ZN_2; PARTIAL.
Hydrolase; Carboxypeptidase; Zinc; Zymogen.
Hydrolase; Carboxypeptidase; Activation Peptide.
SEQUENCE
                                                                           Elapidae;
                                                                                                                         Lepidosauria; Squamata; Scleroglossa;
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MEROPS; M14.003; -.
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Best Local :
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01-NOV-1997
01-NOV-1997
                                                                                                                                                                                                                                                                         MEDLINE=96074573; PubMed=7488215;
Hall M., van Heusden M.C., Soederhaell K.;
"Identification of the major lipoproteins in crayfish hemolymph proteins involved in immune recognition and clotting.";
Blochem. Blophys. Res. Commun. 216:939-946(1995).
-1- FUNCTION: INVOLVED IN LIPID TRANSPORT. PLAYS A ROLE IN HEMOL CLOTTING. MAY BE INVOLVED IN WOUND HEALING IN THE CUTICLE.
-1- SUBCELULAR LOCATION: EXTRACELULAR.
-1- TISSUE SPECIFICITY: SECRETED INTO THE HEMOLYMPH.
-1- SIMILARITY: TO VITELLOGENINS.
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_PACLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Characterization and cytotoxicity of L-amino acid oxivenom of king cobra (Ophiophagus hannah).";
Int. J. Biochem. Cell Biol. 29:911-919(1997).
-!- FUNCTION: HAS CYPOTOXIC ACTIVITY (BY SIMILARITY).
-!- CATALYTIC ACTIVITY: A L-AMINO ACID + H(2)O + O(2)
NH(3) + H(2)O(2).
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Ahn M.Y., Lee B.M.,
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Ponnudural G., Chung M.C.M., Tan N.-H.;
"Purlfication and properties of the L-au
pit viper (Calloselasma rhodostoma) ven
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COFACTOR: FAD.
SUBUNIT: HOMODIMER (PROBABLE).
PTM: GLYCOSYLATED.
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TISSUE-POLLEN;

(**MEDLINE-98160390; PubMed-9500754;

A: Boluda L., Alonso C., Fernandez-Caldas E.;

A: Boluda L., Alonso C., Fernandez-Caldas E.;

T "Purification, characterization, and partial seque I allergens of Olea europaea.";

L. J. Allergy Clin. Immunol. 101:210-216(1998).

C. --- DISEASE: MAJOR ALLERGEN FROM OLIVE POLLEN. IMI

C. --- DISEASE: MAJOR ALLERGEN FROM OLIVE POLLEN. IMI

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T 01-NOV-1997 (Rel. 35, Last sequence update)
T 15-DEC-1998 (Rel. 37, Last annotation update)
MAJOR POLLEN ALLERGEN OLE E 4 (OLE E IV) (FRAGME)
Olea europaea (Common olive).
Eukaryotta; Viridiplantae; Embryophyta; Tracheoph
Magnoliophyta; eudicotyledons; core eudicots; As
Lamiales; Oleaceae; Olea.
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O1-APR-1993 (Rel. 25, Created)

O1-APR-1993 (Rel. 25, Last sequence update)

O1-APR-1993 (Rel. 25, Last annotation update)

30-MAY-2000 (Rel. 39, Last annotation update)

SUPEROXIDE DISMUTASE [CU-ZN] II (EC 1.15.1.1) (S

Picea abies (Norway spruce) (Picea excelsa).

Eukaryota; Viridiplantae; Embryophyta; Tracheoph

Coniferopsida; Coniferales; Pinaceae; Picea.
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P80741;
01-NOV-1997
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                                                                                                                                                                                                                                                                                                                                      SEQUENCE.
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PROSITE; PS00087; SOD_CU_ZN_1;
PROSITE; PS00332; SOD_CU_ZN_2;
Oxidoreductase; Copper; Zinc; M
NON_TER 21 21
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Q52838;
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-- FUNCTION: HAS A NON-HEMOLYTIC ACTIVITY. HAS A BROAD SPECTRUM OF ACTIVITY AGAINST BOTH GRAM POSITIVE AND GRAM NEGATIVE BACTERIA, FUNGI AND PROTOZOA.
MEDLINE=97002748; PubMed=8850088; Scott D.B., Young C.A., Collins-Emerson
                     SEQUENCE FROM N.A. STRAIN-NZP 2213;
                                                                                                                01-NOV-1997
                                                                                                                                                                                                                                                                      Amphibian skin; Antibiotic.
DISULFID 18 24
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Eukaryota; Metazoa; (
Amphibia; Batrachia;
                                                         Bacteria;
                                                                  Rhizobium
                                                                                    NODULATION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAEGURIN-6
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PROTEIN D (FRAGMENT).
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Ranidae; Rana
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                                                                                                   Amphibian skin; Amidation.
MOD_RES 15 15
SEQUENCE 15 AA; 1410 MW
                                                                                                                                                                        Waugh R.J., Stone D.J.M., Bowle J.H., Wallace J.C., Tyler M.J.;
"Peptides from Australian frogs. The structures of the caerins and
caeridins from Litoria gilleni.";
J. Chem. Res. 139:937-961(1993),
J. Chem. Res. 139:937-961(1993),
J. FUNCTION: CAERIDINS SHOW NEITHER NEUROPEPTIDE ACTIVITY NOR
ANTIBIOTIC ACTIVITY.
-:- TISSUE SPECIFICITY: SECRETED BY THE SKIN PAROTOID AND/OR ROSTRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ROCKMAN E.S., Lewis P.E., Pankhurst C.E.;
"Novel and complex chromosomal arrangement of Rhizobium loti
"Novel and complex chromosomal arrangement of Rhizobium loti
nodulation genes.";

MOI. Plant Microbe Interact. 9:187-197(1996).
-1- FUNCTION: NODD REGULATES THE EXPRESSION OF THE NOD ABCFE GENES
-1- FUNCTION OF DTHE NODULATION PROTEINS. NODD IS ALSO A NEGATIVE
REGULATOR OF ITS OWN EXPRESSION. BINDS FLAVENOIDS AS INDUCERS.
-1- SIMILARITY: BELONGS TO THE LYSR FAMILY OF TRANSCRIPTIONAL
                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; (Amphibia; Batrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a copyright the Swiss Institute of Bioinformatics and the EMBL
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                                                                                                                                                                                                                                                                          TISSUE-PAROTOID GLAND;
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cription regulation; DNA-binding; Activator;
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41.7%;
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                                                                                                                                                                                                                                                                                                                               a; Craniata; Vertebrata;
Neobatrachia; Bufonoidea
                                             Score
Pred.
                                                                                                      AMIDATION.
06F1BBF272550CBF
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Pred. No. 1
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                                   Mismatches
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a; Hylidae;
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Search completed: February 5, 2001, 10:56:02 Job time: 502 sec

Page 9

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Title:
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Listing first 45 summaries
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Gapop 10.0 , Gapext 0.5
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sp_organelle:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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## ALIGNMENTS

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OS Bos taurus (Bovine). OC Eukaryota; Metazoa; OC Mammalia; Eutheria;	01-OCT-2000 ENTEROTOXIN-	AC Q9TRB9; DT 01-MAY-2000 (TrEMBLrel.	TRB	RESULT 2	Db 2 LLTGLDLLGI 11	Qy 7 LSTGLDMVGL 16	Query Match Best Local Similarity 60. Matches 6; Conservative		RL Biochim Biophys.		RY SEQUENCE:	OX NCBI_TaxID=9823;		Sus scrofa	LANOSTEROL	01-MAY-2000 (	ID Q9TRXO PRELIMINARY;	TRXO	
(Bovine). Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;	rel. 15, Last annotation update) GLYCOPROTEIN PP20K (FRAGMENT).	13, Creat	NARY; PRT; 20 AA.				31.2%; Score 34; DB 6; Length 11; 60.0%; Pred. No. 30; ative 3; Mismatches 1; Indels 0; Gaps 0;	1084 MW; 8A7A5CBC2AA72861 CRC64;	Biochim. Biochys. Acta 1078:388-394(1991).	naracterization of cytochrome P-45014DM (lanosterol a) from pig liver microsomes.":	PubMed=1859829;		Chordata; Craniata; Vertebrata; Euteleostomi;		ETHYLASE,	μω	NARY; PRI; II AA.		

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RESULT
Q9ZWY2
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Q9ZWY2;
Q9ZWY2;
Q1-MAY-1999 (TrEMBLrel. 10
01-MAY-1999 (TrEMBLrel. 10
01-MAY-1999 (TrEMBLrel. 11
ILEX, STX2A, STX2B, GENES
                                                                     SEQUENCE FROM N.A.
MEDLINE-97076910; PubMed-8975608;
Datz M., Janetzki-Mittmann C., Franke
             containing
                                                                                                                                                 Bacteriophage 933W.
Viruses; dsDNA viruses,
NCBI_TaxID=10730;
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Submitted (SEP-1998) to the
EMBL; AJ011106; CAA09489.1;
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STRAIN-BALB/C; TISSUE-SKELETAL MUSCLE;
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Mammalia; Eutheria;
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HSSP; P02754; 1BSY.
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MEDLINE=94259890; PubMed=8201051;
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J. Dairy Sci. 77:930-939(1994).
                                 Analysis of the enterohemorrhagic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Shida K., Takamizawa K., Nagaoka M.,
Enterotoxin-binding glycoproteins i
neated bovine milk.":
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STRAIN=IRBB21; Zhai W., He I
liu G., Yang J., Zhai W., He I
Submitted (MAY-1997) to the EI
EMBL; AF003599; AAB94484.1; -
INTERPRO; IPR001356; -
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EMBL; Y107
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oryza sativa (Rice).

Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Oryza.

NCBI_TaxID=4530;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homeobox; DNA-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-97257502;
Schmidt H., Scheel
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 33.6; Conservative
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EMBL/GenBank/DDBJ
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Pred. No. 1.1e
1; Mismatches
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ur protein.
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NO. 1.1e+03;
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No.
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encoded in identical pos
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Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata;

Craniata; Vertebrata;

Euteleostomi;

Last sequence update)
Last annotation updat
IV (FRAGMENT).

update)

Created)

Page

SOR REPRESENTATION OF THE PROPERTY OF THE PROP

Thorner P.S.;

SEQUENCE FROM N.A.
MEDLINE-99293036; Pubmed-10362815;
MEDLINE-97 Harvey S., Sado Y., Naito

Ι.,

Ninomiya Y.,

Jacobs

type IV in Alport ein assembly level

and

NCBI\_TaxID=9615; Mammalia;

Eutheria;

Carnivora;

Fissipedia; Canidae;

Canis

"Absence of the alpha6(IV) chain of collagen typsyndrome is related to a failure at the protein does not result in diffuse leiomyomatosis."; Am. J. Pathol. 154:1883-1891(1999).

EMBL; AF128530; AAD45500.1; -...

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RESULT ORSSULT ORSSULT ORS SULT OR SUL
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Matches 5
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Matches 6
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Hsleh Y.-H., Bobo L.D.;
Hsleh Y.-H., Bobo L.D.;
"Diversity of major outer membrane
"Diversity of major outer demic vi
submitted (JUN-1998) to the EMBL/C
EMBL; AF070327; AAC2598.1; -.
NON_TER 1 1
NON_TER 2 2 22
SEQUENCE 22 AA; 2237 MW; 3BD20
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085543;
01-NOV-1998
01-NOV-1998
                                                                                                                                                                MHC.
SEQUENCE
                                                                                                                                                                                                        Joyce S., Kuzushima K., Kepecs G., Angeletti R.H., Nath "Characterization of an incompletely assembled major histocompatibility class I molecule (H-2Kb) associated long peptides: implications for antigen processing and proc. Natl. Acad. Sci. U.S.A. 91:4145-4149(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O9TNQ1 PRELIMINARY; PRT; 15 AA.

Q9TNQ1;
01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAY-2000 (TrEMBLrel. 13, Last annotation update)
BETA 2M - CLASS 1-BINDING PEPTIDE-MAJOR HISTOCOMPATIBILITY
H-2KB-SPECIFIC MOLECULE POORLY ASSOCIATED WITH BETA 2-MICR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chlamydia trachomatis. Bacteria; Chlamydiales;
                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                           MEDLINE-94240094; PubMed-8183884;
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       1 PRYFNQL 7
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                                                   Similarity
5; Conser
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(TrEMBLrel.
(TrEMBLrel.
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                                                                                                                                                                                                                                                                                                                                                                                                             Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       outer membrane protein (omp-1) of Chlamydia homa endemic villages, Kongwa, Tanzania."; ) to the EMBL/GenBank/DDBJ databases. 25298.1; •.
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                                                                        . 98;
                                                                                                                                                                MW;
                                                 ; Score 25; DB; Pred. No. 1.3e
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N (FRAGMENT).
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Pred.
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                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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                                                                      DB 7;
1.3e+03
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"Genetic mapping of 40 cDNA clones on the mouse genome by PCR.";
MAMM. Genome 5:349-355(1994).

-i. FUNCTION: THIS ENZYME IS NECESSARY FOR TARGET CELL LYSIS IN CELLMEDIATED INMUNE RESPONSES: IT CLEAVES AFTER ASP. SEEMS TO BE
LINKED TO AN ACTIVATION CASCADE OF CASPASES (ASPARTATE-SPECIFIC
CYSTELNE PROTEASES) RESPONSIBLE FOR APOPTOSIS EXECUTION. CLEAVES
CASPAGE-3, -7, -9 AND 10 TO GIVE RISE TO ACTIVE ENZYMES MEDIATING
APOPTOSIS (BY SIMILARITY).

SEQUENCE FROM N.A.
STRAIN-SPRET/EI;
MEDLINE-94319082; PubMed-8043949;
KO M.S., Wang X., Horton J.H., Hagen M.D., Takahashi N., Maezaki

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VSLAAGW 12

14 VGLAADW 20

Q6253B

PRELIMINARY;

21

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Q62538;
Q62538

PROTEASE

1) (CCP1)

Eukaryota; Metazoa; Mammalia; Eutheria;

(Western wild mouse). Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; utheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus

NCBI\_TaxID=10096;

Mus spretus

Query Match Best Local S Matches 5

Similarity 5; Conserv

Conservative

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71 . 48;

Score 26; DB Pred. No. 6.9e 0; Mismatches

DB 6; 6.9e+02;

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Length 12

Indels

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Query Match
Best Local S
Matches 5
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5; Conserv
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Score 26; DB 11; Pred. No. 1.3e+03; 4; Mismatches 5;
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PRYLLQL

Hydrolase; NON\_TER SEQUENCE

Serine protease;

Zymogen; T-cell; Cytolysis; Apoptosis.

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MW;

9D4C8253DFB1AEE6

CRC64;

EMBL; U05708; AAB60471.1; HSSP; P04187; 2CP1. MEROPS; S01.136; -. MGD; MGI:109267; Gzmb.

PROTEASES.

- I- SUBCELLULAR LOCATION: CYTOPLASMIC GRANULES OF CYI
LYMPHOCYTES AND NATURAL KILLER CELLS.
- I- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO
TRYPSIN FAMILY. STRONGEST TO OTHER GRANZYMES AND

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01-MAY-1999 (TIEMBLIEL 10, LI
01-MAY-1999 (TIEMBLIEL 10, LI
01-MAY-1999 (TIEMBLIEL 10, LI
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                                                                                                                                                WEDLINE-96139410; PubMed-8557586; Yano K., Yamasaki M., Yoshida M., Matsuda Y., Yamaguchi K.; "RES-701-2, a novel and selective endothelin type B receptor antagonist produced by Streptomyces sp. II. Determination of primary structure."; Antibiot. 48:1368-1370(1995).

SEQUENCE 16 AA; 2061 MW; 4E7B0E0789E244DB CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-98403943; PubMed-9734874; Tartaglia M., Saulle E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-PERIPHERAL BLOOD;
MEDLINE-98403943; PubMed
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Mammalia; Eutheria;
NCBI_TaxID=9823;
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01-MAY-2000
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Q47529;
Q1-NOV-1996 (TrEMBLrel. 01,
Q1-NOV-1996 (TrEMBLrel. 08,
Q1-NOV-1998 (TrEMBLrel. 08,
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Kounnas M.Z., Wolz R.L., Gorbea C.M., Bond J.s
Kounnas and -B. Cell surface endopeptidases
J. Biol. Chem. 266:17350-17357(1991).
SEQUENCE 19 AA; 2157 MW; 81E66F19417E20C5
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Tagawa Y., Ishikawa H., Yussa N.;
"Purification and partial characterization of protein of Haemophilus somnus.";
Infect. Immun. 61:91-96(1993).
SEQUENCE 16 AA; 1709 MW; 910FCA6B728D0D65
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01-MAY-2000 (TrEMBLrel. 14, Last annotat
01-JUN-2000 (TrEMBLrel. 14, Last annotat
MAJOR OUTER MEMBRANE PROTEIN (FRAGMENT).
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Mammalia; Eutheria;
NCBI_TaxID=10095;
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O1-MAY-2000 (TrEMBLrel.
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      SEQUENCE FROM N.A.
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Post D.A., Hore-Jensen B., Switzer R.L.;
"Characterization of the hemA-prs region of the Escherichia Salmonella typhimurium chromosomes: identification of two op frames and implications for prs expression.";
J. Gen. Microbiol. 139:259-266(1993).
EMBL; M77237; AAA24432.1; -.
EMBL; M77237; AAA24432.1; -.
                                                                                                                                                                                                                                                                        O9T2J3;
01-mAY-2000 (TrEMBLrel. 13, Created)
01-mAY-2000 (TrEMBLrel. 13, Last sequence up
01-JUN-2000 (TrEMBLrel. 14, Last annotation
8 KDA PHOTOSYSTEM I PSAG PROTEIN (FRAGMENT).
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Eukaryota; Viridiplantae; E
Magnoliophyta; Liliopsida;
                    SEQUENCE.

MEDLINE-94105345; PubMed-8278548;

Obokata J., Mikami K., Hayashida N., Nakamu Obokata J., Mikami K., Hayashida N., Nakamu Molecular heterogeneity of photosystem I.
                                                                                                                                        Eukaryota; Viridiplantae; Embryophyta; Magnoliophyta; eudicotyledons; core euc Solanales; Solanaceae; Nicotiana. NCBI_TaxID=4096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homeobox;
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STRAIN-IRBB21;
                                                                                                                                                                                                                                 Chloroplast
                                                                                                                                                                                                                                                        Nicotiana sylvestris
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NCBI_TaxID=4530;
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EMBL/GenBank/DDBJ 
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Pred. No. 2e+C
3; Mismatches
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, Nakamura M., Sugiura
stem I. psaD, psaE, psa
Nicotiana spp.";
                                                                                                                                                                                  ca; Tracheophyta; Spermatophyta;
eudicots; Asteridae; euasterids I;
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THE FIRST 23
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SEQUENCE
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SIGNAL
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Viruses; dsDNA viruses,
Alphaherpesvirinae; Var
NCBI_TaxID=10345;
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Taniyama M., Katagiri T., Tom
J. Biochem. 117:400-407(1995)
SEQUENCE 16 AA; 1809 MW;
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Mammalia; Eutheria;
NCBI_TaxID=10118;
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SEQUENCE 23 /
                                                                                                                                                                                          MEDLINE-95081163; PubMed-7989378;
Tomilo M., Wilkinson K.S., Ryan P.;
"Can a signal sequence become too hyd
J. Biol. Chem. 269:32016-32021(1994).
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ITI HEAVY CHAIN-RELATED PROTEIN (FRAGMENT).
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6; Conserv
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4; Conserv
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5; Conservative
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3 CODONS OF P
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AA;
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AA; 2415 MW; E56CC139D095A968
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Rodentia;
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Varicellovirus.
                  22.0%;
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Tomita
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GC ALLELE ASGR6L PRECURSOR (FRAGMENT).
Score 24; DB Pred. No. 3.1e 1; Mismatches
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Pred. No. 2.1e
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Sciurognathi; Muridae;
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2.1e+03;
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                    DB 12;
3.1e+03;
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Murinae; Rattus.
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAY-2000 (TrEMBLrel. 13, Last annotation update)
SMALL NUCLEAR INCLUSION POLYPROTEIN CLEAVAGE PRODUCT
TODACCO etch virus (TEV).
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01-MAY-2000
01-MAY-2000
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Bukaryota; Viridiplantae; Embryophyta;

Magnoliophyta; eudicotyledons; core euc

Caryophyllales; Chenopodiaceae; Beta.

NCBI_TaxID=3555;
  Q9UCP7
                                                                                                                                                                                                                                                                                                                                              Dougherty W.G., Parks T.D.;
"Post-translational processing of the tobacco etch virunclear inclusion polyprotein: identification of an in site and declimitation of vPg and proteinase domains."; virology 183:449-456(1991).
SEQUENCE 15 AA; 1680 MW; 2273B6E461D0F28C CRC64;
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Saraflan V., Kim Y., Poole R.J., Rea P.A.;
"Molecular cloning and sequence of cDNA encoding the pyrophosphate-energized vacuolar membrane proton pump of Arabidopsis thaliana.";
Proc. Natl. Acad. Sci. U.S.A., 89:1775-1779(1992).
SEQUENCE 13 AA; 1243 MW; C9DB193C37C22AAD CRC64;
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01-MAY-2000 (TIEMBLIEL 13, Last sequence update)
01-JUN-2000 (TIEMBLIEL 14, Last annotation update)
101-JUN-2000 (TIEMBLIEL 14, Last annotation update)
H(+)-TRANSLOCATING (PYROPHOSPHATE-ENERGIZED) INORGANIC
PYROPHOSPHATASE BETA-2 POLYPEPTIDE (EC 3.6.1.1) (FRAGMENT).
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Matches 4
                                       O24445 PRELIMINANA,
O24445,
O1-JAN-1998 (TrEMBLrel. 05, Created)
O1-JAN-1998 (TrEMBLrel. 05, Last sequence update)
O1-AUG-1998 (TrEMBLrel. 07, Last annotation update)
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THIS ORE RESIDES IN THE 5'UTR OF CPPHY2.
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09TRD9;
01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sec
01-JUN-2000 (TrEMBLrel. 14, Last and
V2 VASOPRESSIN RECEPTOR (FRAGMENT).
Ceratodon purpureus (Moss).
Eukaryota; Viridiplantae; E
Dicranidae; Dicranales; Dit
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
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01-MAY-2000 (TremBLrel. 13, Created)
01-MAY-2000 (TremBLrel. 13, Last sequence update)
01-MAY-2000 (TremBLrel. 13, Last annotation update)
11-MAY-2000 (TremBLrel. 13, Last annotation update)
11-MAY-2000 (TremBLrel. 13, Last annotation update)
11-MAY-2000 (TremBLrel. 13, Last annotation update)
13-MAY-2000 (TremBLrel. 13, Created)
14-MAY-2000 (TremBLrel. 13, Created)
15-MAY-2000 (TremBLrel. 13, Created)
16-MAY-2000 (TremBLrel. 13, Created)
17-MAY-2000 (TremBLrel. 13, Created)
18-MAY-2000 (TremBLrel. 13, Last sequence update)
18-MAY-2000 (TremBLrel. 13, Last sequence update)
19-MAY-2000 (TremBLrel. 13, Last sequence update)
19-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-10-MAY-
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Biochemistry 32:13537-13544(1993).
SEQUENCE 17 AA; 1904 MW; E3C89EB346200E57
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Kojro E., Elch P., Gimpl G., Fahrenholz F.;
"Direct identification of an extracellular
renal V2 wasonressin recentor ":
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Schwarting R., Brenner M.B.;
"A family of beta 7 integrins on human mucosal:
Proc. Natl. Acad. Sci. U.S.A. 89:1924-1928(1992)
SEQUENCE 17 AA; 1903 MW; 053C3931745A8BA2 CI
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae
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MEDLINE-92179294;
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e; Embryophyta; Bryophyta;
Ditrichaceae; Ceratodon.
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SEQUENCE FROM N.A. NCBI\_TaxID=3225; [1]

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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2000 (TrEMBLrel. 14, Last annotation update)
01-BERONIN 60 BETA CHAIN (FRAGMENT).
Narcissus pseudonarcissus (Daffodil).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Asparagales; Amaryllidaceae; Narcissus.
NCBL_TaxID-39639;
                                                                                                                                                                                                                                                                                                                                                                     01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2000 (TrEMBLrel. 14, Last annotation update)
8 KDA PHOTOSYSTEM I PSAG PROTEIN (FRAGMENT).
NICOLIANA tabacum (Common tobacco).
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                                                                                                                                                                                                            Eukaryota; Viridiplantae; Embryophyta; Magnoliophyta; eudicotyledons; core euc Solanales; Solanaceae; Nicotiana.
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Plant Physiol. 112:446-446(1996).
[2]
MEDLINE-94105345; PubMed-8278548; Obokata J., Mikami K., Hayashida N.,
                                                                                           SEQUENCE.
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SEQUENCE 19 AA; 1976 MW; E08869791A6712FE CRC64;
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Copyright (c) 1993 - 2000 Compugen Ltd
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65 kD Glutamic aci
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65 kD Glutamic acid
Human 65 kD glutam
Glutamic acid deca
GAD65 fragment, pe
                                                                                                                                                                                                                                                                                                                         Description
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Human 65 kD glutam
Glutamic acid deca
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R76647	331	R97212	413	992	100	R22911	1235	3304	5878	s	907	561	258	537	637	37	54	736	8	193	Y79452	735	319	5468	6704	Y79295	2933	664	504	36	70	W70362
Peptide derived fr	n calcium se	Calcium sensor pro	C peptide	Rat sp. AMPK-alpha	cial imm	20	hsp60 pep	eat shock	ied p	4I) 1	thogen derived	li Tra T hel	Escherichia coli T	T cell epi	Chlamydial MOMP VD	Chlamydial MOMP VD	c peptid	1 1mmu	Fragment of p53 b1	HsRec2 peptide res	Rat kynurenine ami	P1 1	Fragment of p53 bi	lentus protea	us protea	rorenin p	lation pep	lati	pioti	pitope tag	itope tag	Epitope tag WTGLD,

## ALIGNMENTS

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W18846;
                                                                                                                                W18846 standard; peptide; 20
65 kD Glutamic acid decarboxylase peptide fragment V.
                                         05-JAN-1998 (first entry)
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GAD; 65 kD; human; glutamic acid decarboxylase; autoreactive; diagnosis; insulin-dependent diabetes mellitus; IDDM; cell-mediated disease; predisposition; autoimmune; tumour; rheumatoid arthritis; multiple sclerosis.

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WING COLOR OF THE PRICE OF THE 
                                            Skin test for diagnosis of cell-mediated diseases, esp. diabetes involving intradermal admin. of auto:reactive substances
                                                                                                                                                                                        WPI; 1997-088254/09
                                                                                                                                                                                                                                                                             Donie F, Endl J, Ganz M, Jung G, Pozzilli P, Stahl P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-JUL-1995;
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Stahl P,
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               The present peptide is a framgent of the human 65 kD glutamine decarboxylase (GAD), which can be used to diagnose, or diagnose a predisposition to, a tumour or immunological disease, preferably an autoimmune disease, especially diabetes. It can also be used as a reagent to determine specific T cell subpopulations, in medicaments to treat or prevent immunological diseases, preferably autoimmune diseases, especially diabetes, to produce antigens, especially subpopulations, which can be used to produce antigens or for subpopulations, which can be used to produce antigens or for
                                                                                                                                                                                                                                                                        Claim 1;
                                                                                                                                                                                                                                                                                                                                           Glutamine decarboxylase peptide(s) -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; glutamine decarboxylase; GAD; diagnosis; predisposition; tumour; immunological; disease; autoimmune; diabetes; reagent; tumour; immunological; subpopulation; medicament; treatment; prevention; production; antigen; immunogen; tolerogen; isolatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human 65 kD glutamine decarboxylase peptide
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reinjection,
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20; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                             Boitard C,
Van Endert P;
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optionally after
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Pred. No. 4.2e-13;
Mismatches 0;
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Best Local Similarity
Matches 16; Conserv
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                                                                                                                                                                                            Q86481 and Q86482 encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 were derived. These fragments can be used to detect autoantibodies against GAD. e.g. to diagnose and treat GAD-related autoimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
                                                                                                                                                                                                                                                                                                         New polypeptide fragments of glutamic acid decarboxylase - for diagnosis and treatment of auto:immune disease, esp. insulin dependent diabetes, also related nucleic acid, vectors, antibodies, hybridoma(s) etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glutamic acid decarboxylase; GAD65; auotimmune insulin-dependant diabetes mellitus; stiff man
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                                                                                                                                                                                                                                                                                                                                                                        WPI; 1995-131360/17.
                                                                                                                                                                                                                                                                                                                                                                                                  Clare-Salzler MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-SEP-1993;
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standard; peptide;
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llarity 100.0%;
Conservative 0
                                                                                                           77.1%; Score 84; DB ilarity 100.0%; Pred. No. 1. Conservative 0; Mismatches
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Pred. No. 4.2e-13;
; Mismatches 0;
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                                                                                                                        DB 16; I
1.3e-08;
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Tue

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(first entry)

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RESULT
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                           This sequence represents a fragment of the glutamic acid decarboxylase 65 (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monoclonal antibodies and in inmunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-JUN-1995;
21-SEP-1990;
18-JUN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ameliorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stiff man
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAD65; glutamic acid decarboxylase 65; autoimmune disorder; IDDM; insulin dependent diabetes mellitus; Stiff man disease; diagnosis;
                                  neuron; central T cell; therapy.
                                              65 kD glutamic acid decarboxylase; human; GAD65; enzyme; pancreas; neuron; central nervous system; type I diabetes; autoimmune response;
                                                                                    GAD65 residues 177-191.
                                                                                                              08-OCT-1997
                                                                                                                                      W12405;
                                                                                                                                                             W12405 standarď;
                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                   available from natural sources.
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           Homo sapiens
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16; Conserv
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                                                                                                             (first entry)
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90US-0586536.
91US-0716909.
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                                                                                                                                                              peptide;
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Pred. No.
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1.3e-08;
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                          pancreas, and in heurons of the central nervous system. There are two isoforms of GAD, a 67 kD isoform, and GADGS. Immunodominant regions of GADGS have been identified in Type I diabetic pattients. These GADGS fragments, and analogues, are used in the methods of the invention. The methods are for detecting or treating diabetes or a predisposition to diabetes. The peptides can also be used for ameliorating an autoimmune response in a patient. Alteration of the native peptides with selective changes of crucial residues can induce unresponsiveness or change the responsiveness of antigen-specific autoreactive T cells. The peptide analogues compete for binding to MHC and do not cause proliferation of the corresponding native peptide-specific T cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of human glutamic acid decarboxylase (GAD65) (see W12402 for full length wild type protein). GAD is an enzyme expressed in the beta cells of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 23; Page -; 28pp; English.
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                                           DE4418091-A1
                                                                     Homo sapiens
                                                                                              diagnosis; autoimmune
                                                                                                                diabetes; 1-cell subpopulation; detection; antigen production.
                                                                                                                                          Peptide defived from
                                                                                                                                                                       05-MAR-1996 (first entry)
                                                                                                                                                                                                     R76657;
                                                                                                                                                                                                                              R76657 standard; peptide; 14 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W12403-W12413 represent fragments and analogues of the the 65 kD isoform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for ameliorating auto-immune responses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New human glutamic acid decarboxylase peptide(s) - used for treatment, diagnosis and determining predisposition to diabetes and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1997-087322/08.
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(NEUR-) NEUROCRINE BIOSCIENCES INC.
(SBAR-) ST BARTHOLOMEW'S HOSPITAL CENT CLINICAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-JUN-1995;
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                                                                                                                                                                                                                                                                                                                    2 RYFNQLSTGLDMVGL 16
                                                                                                                                                                                                                                                                                                     1 ryfnqlstgldmvgl
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15; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                     15 AA;
                                                                                                                                                                                                                                                                                                                                                              Conservative
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                                                                                                                                                                                                                                                                                                       15
                                                                                                                                            human
                                                                                                                                                                                                                                                                                                                                                                              100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                           70.6%;
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                                                                                                                                          glutamic acid decarboxylase 16
                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                           Score 77;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                             Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                           DB
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Matches 14
                                            Donie F,
Pozzilli
  Skin test
                                                                                                             20-JUL-1995;
                                                                                                                                                                                                                                                                                                            W18865;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                specifically react with T-cell sub-populations isolated from recently diagnosed Type-I diabetics. Pharmaceutical compsns. conty. these peptides and those shown in R77571-72, are useful for the diagnosis of a disease or predispositions of immune system diseases, tumours, and autoimmune diseases, including diabetes. The peptides are able to detec specific T-cell subpopulations that are then used for antigen prodn.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Antigen-specific activated T-lymphocytes interaction with inventive peptide(s) of useful in diagnosis of e.g. diabetes and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Albert W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-FEB-1994;
20-JAN-1994;
                      WPI; 1997-088254/09.
                                                                                                                                            23-JAN-1997
                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                           multiple sclerosis
                                                                                                                                                                                                                                                                 65 kD Glutamic
                                                                                                                                                                                                                                                                                       05-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-MAY-1994;
                                                                            (BOEF ) BOEHRINGER MANNHEIM GMBH
                                                                                                  20-JUL-1995;
                                                                                                                                                                 DE19526561-A1
                                                                                                                                                                                                                     GAD; 65 kD; human; glutamic acid decarboxylase; autoreactive; diainsulin-dependent diabetes mellitus; IDDM; cell-mediated disease; predisposition; autoimmune; tumour; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                 W18865 standard; peptide; 14 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R76642-62 are derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (ENDL/) ENDL J.
(BOEF ) BOEHRINGER MANNHEIM GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 100 les 14; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         by reinjection.
                                            ָט'
                                           Endl J, P, Stahl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Schendel D;
 for diagnosis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                       (first entry)
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94DE-4401629
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                                            Ganz M,
                                                                                                                                                                                                                                                                                                                                                                                                          15
                                                                                                                                                                                                                                                                 decarboxylase peptide fragment 16
                                                                                                                                                                                                                                                                                                                                                                                                                                          67.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   from human glutamic acid decarboxylase and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         German
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cell-mediated diseases, esp. diabetes
                                                      Jung G,
                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 73;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
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                                                      Kientsch-engel
                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 16;
8.2e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and their detection -
peptide-MHC complexes;
auto:immune diseases
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Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        by administering an autoreactive substance intradermally and establishing the diagnosis on the basis of the occurrence or lack of a positive reaction at the site of administration. The method is used for diagnosis of autoimmune and tumour diseases, preferably T-cell-mediated diseases such as rheumatoid arthritis, multiple sclerosis and especially IDDM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             w18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for diagnosis of insulin-dependent diabetes mellitus (IDDM). The diagnosis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected
W12403-W12413 represent fragments and analogues of the the 65 kD isoform of human glutamic acid decarboxylase (GAD65) (see W12402 for full length wild type protein). GAD is an enzyme expressed in the beta cells of the
                                                                                                                                                                                                   (KENN-)
(NEUR-)
(SBAR-)
                                                                                  New human glutamic acid decarboxylase peptide(s) - used for treatment, diagnosis and determining predisposition to diabetes for ameliorating auto-immune responses.
                                                                                                                                                                                                                                                                                                                                                                                                 ney
Location/Qualifiers
Misc-difference 1..15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T cell; therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     65 kD glutamic acid decarboxylase; human; GAD65; enzyme; pancreas; neuron; central nervous system; type I diabetes; autoimmune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAD65 residues 173-187
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W12404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                            WPI; 1997-087322/08
                                                                                                                                                                                                                                                            23-JUN-1995;
                                                                                                                                                                                                                                                                                       24-JUN-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W12404 standard;
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                                                                                                                                                                        PJ,
                                                                                                                                                                                                   KENNEDY INST RHEUMATOLOGY
NEUROCRINE BIOSCIENCES INC
ST BARTHOLOMEW'S HOSPITAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                         Page -;
                                                                                                                                                                                                    BARTHOLOMEW'S HOSPITAL CENT CLINICAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14 AA;
                                                                                                                                                                        Gaur A,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
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                                                                                                                                                                                                                                                            95US-0494624.
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                                                                                                                                                                                                                                                                                                                                                                         /note= "optionally substituted, providing at least
    residues remain wild type"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide; 15
                                                         28pp;
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                                                         English.
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8.2e-07;
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Best Local :
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                                                          W18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for diagnosis of insulin-dependent diabetes mellitus (IDDM). The diagnosis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected by administering an autoreactive substance intradermally and establishing the diagnosis on the basis of the occurrence or lack of a positive reaction at the site of administration. The method is used for diagnosis of autoimmune and tumour diseases, preferably T-cell-mediated diseases such as rheumatoid arthritis, multiple sclerosis and especially IDDM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pancreas, and in neurons of the central nervous system. There are two isoforms of GAD, a 67 kD isoform, and GADGS. Immunodominant regions of GADGS have been identified in Type I diabetic patients. These GADGS fragments, and analogues, are used in the methods of the invention. The methods are for detecting or treating diabetes or a predisposition to diabetes. The peptides can also be used for ameliorating an autolmmune response in a patient. Alteration of the native peptides with selective changes of crucial residues can induce unresponsiveness or change the responsiveness of antigen-specific autoreactive T cells. The peptide analogues compete for binding to MHC and do not cause proliferation of the corresponding native peptide-specific T cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAD; 65 kD; human; glutamic acid decarboxylase; autoreactive; diagnosis; insulin-dependent diabetes mellitus; IDDM; cell-mediated disease; predisposition; autoimmune; tumour; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Skin test for diagnosis of cell-mediated diseases, esp. involving intradermal admin. of auto:reactive substances
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        65 kD Glutamic acid decarboxylase peptide fragment
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 11; Page 9; 12pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-JUL-1995;
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12; Conserv
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P, Stahl
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         59.6%;
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Pred. No.
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2.5e-05;
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                                                                                                               The present peptide is a framgent of the human 65 kD glutamine decarboxylase (GAD), which can be used to diagnose, or diagnose a predisposition to, a tunour or immunological disease, preferably an autoimmune disease, especially diabetes. It can also be used as a reagent to determine specific T cell subpopulations, in medicaments to treat or prevent immunological diseases, preferably autoimmune diseases, especially diabetes to produce antigens, especially subpopulations, which can be used to produce antigens or for reinjection, optionally after inactivation.
                                                                                                                                                                                                                                                                                                              Albert W,
Stahl P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tumour; immunological; disease; autoimmune; diabetes; reager determination; T cell; subpopulation; medicament; treatment; prevention; production; antigen; immunogen; tolerogen; isole
                                                                                                                                                                                                                                                                    Glutamine decarboxylase peptide(s) - for diagnosis and therapy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human 65 kD glutamine decarboxylase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W01796;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         W01796 standard; peptide;
                                                                                              Sequence
                                                                                                                                                                                                                                    Claim 1; Page 12; 15pp; German.
                                                                                                                                                                                                                                                                                                                                                                   14-JUL-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                             16-JAN-1997.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           reinjection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; glutamine decarboxylase; GAD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-OCT-1997
                                                                                                                                                                                                                                                                                                                                             (BOEF ) BOEHRINGER MANNHEIM GMBH.
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pryfnqlstg
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0.0022;
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                                                               GAD65; glutamic acid decarboxylase 65; insulin dependent diabetes mellitus; St therapy.
                                                                                                                                                                                                                                                                                                                                                                     Q86481 and Q86482 encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 were derived. These fragments can be used to detect autoantibodies against GAD, e.g. to diagnose and treat GAD-related autolimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New polypeptide fragments of glutamic acid decarboxylase - for diagnosis and treatment of auto:immune disease, esp. insulin dependent diabetes, also related nucleic acid, vectors, antibodies, hybridoma(s) etc.
07-DEC-1999
                    US5998366-A:
                                          Homo sapiens
                                                                                                              GAD65 fragment, peptide #13.
                                                                                                                                      03-APR-2000
                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clare Salzler MJ, Erlander MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-AUG-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Glutamic acid decarboxylase; GAD65; auotimmune disorders; insulin-dependant diabetes mellitus; stiff man disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Glutamic acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 11; Page 76; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                  Y59573 standard; peptide; 20 AA
                                                                                                                                                                                                                                                                                        Local Similarity
nes 9; Conser
                                                                                                                                                                                                                                                                 12 DMVGLAADW 20
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                                                                                                                                                                                                                                          1 dmvglaadw 9
                                                                                                                                                                                                                                                                                                                                                 20 AA;
                                                                                                                                                                                                                                                                                        Conservative
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                                                                                                                                    (first entry)
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                                                                                                                                                                                                                                                                                     45.9%; Score 50;
100.0%; Pred. No.
Live 0; Mismatc
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GAD65) fragment.
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                                                                                                                                                                                                                                                                                        Mismatches
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                                                                            i; autoimmune disorder; IDDM;
Stiff man disease; diagnosis
                                                                                                                                                                                                                                                                                                 DB 16;
0.018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DL,
                                                                                                                                                                                                                                                                                        0;
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                                                                            diagnosis;
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RESULT 13
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21-SEP-1990;
18-JUN-1991;
                              WPI; 1998-348546/30
N-PSDB; V33280.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ameliorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stiff man disease -
Epitope tagging of genes, transcripts and polypeptides - using
                                                                                    Jarvík JW;
                                                                                                                 (JARV/) JARVIK J W
                                                                                                                                                       09-DEC-1996;
                                                                                                                                                                                         09-DEC-1997;
                                                                                                                                                                                                                                                                                              Synthetic
                                                                                                                                                                                                                                                                                                                               Target nucleotide; epitope; gene tagging; epitope tagging.
                                                                                                                                                                                                                                                                                                                                                                 Epitope tag WIGLD,
                                                                                                                                                                                                                                                                                                                                                                                                                                      W70362;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   available from natural sources.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnostis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-APR-1997;
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                                                                                                                                                                                                                                                          WO9826094-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12 DMVGLAADW 20
||||||||
1 dmvglaadw 9
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9; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        represents a fragment of the glutamic acid decarboxylase in. The invention relates to a method of amelioration can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95US-0485725.
90US-0586536.
91US-0716909.
                                                                                                                                                       96US-0762106
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                                                                                                                                                                                                                                                                                                                                                                 open reading frame
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100.0%; Pred. No.
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RESULT
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Matches
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The epitope tag is encoded by the nucleotide sequence independently of the reading frame. The epitope and methods disclosed can be used for tagging of genes, transcripts and polypeptides. They can be used for e.g. discovering new genes, determining the size and abundance of proteins produced by newly discovered genes, tracking the movement of
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Epitope tagging of genes, transcripts and polypeptides - usi-
oligonucleotide comprising a nucleotide sequence encoding the
epitope independently of the reading frame of the nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W70363;
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                                                                                                                                                                                                                                                                                                     Disclosure; Page 15; 46pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-348546/30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Target nucleotide; epitope; gene tagging; epitope tagging
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Epitope tag WTGLD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14-DEC-1998
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                                                                                 The epitope tag is encoded by the nucleotide sequence independently of the reading frame. The epitope and methods disclosed can be used for tagging of genes, transcripts and polypeptides. They can be used for e.g. discovering new genes, determining the size and abundance of proteins produced by newly discovered genes, tracking the movement of proteins within cell membranes, monitoring receptor binding and internalisation of exogenous proteins, identifying the components of functional protein complexes, purifying proteins, discovering the function of proteins. The products, methods and uses are particularly used for proteins that are unstable, are difficult to purify, or share epitopes with a number of other proteins. The methods overcome the inefficiency of epitope tagging caused by reading frame obstacles and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Epitope tagging of genes, transcripts and polypeptides - using oligonucleotide comprising a nucleotide sequence encoding the epitope independently of the reading frame of the nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Page 15; 46pp; English.
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                                                                                                                                                            A library of small, efficient peptide biotinylation sequences (R65032-46) was generated by using a generic peptide (R65020) and a system known as the "peptides on plasmids" system. At some positions in the sequences, no clear consensus is apparent. At other residues, however, clear trends emerge. A protein can be biotinylated by constructing a recombinant DNA expression vector encoding a fusion protein, comprising a protein and a biotinylation peptide. A host cell, eg. E. coli is transformed with the vector and is cultured in the presence of biotin and a biotinylation enzyme, eg. BirA.
                                                                                                                                                                                                                                                                                            Production of biotinylated proteins by expression of recombinant DNA vector - which encodes a fusion prote comprising a protein and a biotinylated peptide.
                                                                                                                                         Sequence
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defined; purification; BirA; enzyme; biotin.
                                                                                                                                                                                                                                                                        Page 136;
                                                                                                                                          22 AA;
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RESULT 18
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Best Local
                                             Biotinylation enzyme; biotin-protein ligase; BirA; labelling; biotin carboxyl carrier protein; BCCP; Escherichia coli; fusion protein; identification; purification; diagnosis; research:
                                                                                                                                                                                                                                                                                                                                                                                    Peptides W46648-49 are non-naturally occurring biotinylation peptides, derived from a library constructed to express peptides of the generic sequence W46623. The library was constructed using oligonucleotides v16118-20. The peptides contain a biotinylatable sequence motif, recognised by a biotinylation enzyme, e.g. biotin-protein ligase (BirA). The C or N terminus of the peptides can be covalently coupled to a protein that is incapable of being biotinylated by a biotin ligase. The peptides can be biotinylated in vitro or in vivo, especially with BirA biotin ligase, and used for the purification, immobilisation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Biotinylation peptide; biotinylation enzyme; biotin-protein ligase; BirA, biotin ligase; biotin; purification; immobilisation; labelling;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W46649;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W46649 standard; peptide; 22 AA.
           Escherichia coli. Synthetic.
                                                                                                 Biotinylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 3; Column 66; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US5723584-A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         detection; protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide(s) that can be biotinylated by biotin ligase - and fusion
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                                                                                                                                                                                                                                                                                      Local Similarity
mes 7; Conserv
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                                                                                                                                                                                                                                                               7 LSTGLD----MVGLAADW
                                                                                                                                                                                                                                  : |||| : |: ||
metgldlrpiltgmkmdw
                                                                                                                                                                         standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        containing
                                                                                                                                                                                                                                                                                                                                                                           or detection of proteins.
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                                                                                                                          (first entry)
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                                                                                                peptide SEQ ID
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Pred. No.
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6.5;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            biotinylation of proteins synthesized by recombinant DNA techniques in vivo with a biotinylation peptide of less than 50 amino acids. The method comprises: (a) on the surface of a substrate, providing a fusion protein comprising a recombinant protein and a peptide defined by the sequence given in Y24492, where the peptide is capable of being biotinylated by a biotin ligase at the lysine residue adjacent to cosition 8 and is 13-50 as in length; (b) in a predefined region of the substrate, contacting the fusion protein with an enzyme; and (c) determining whether the fusion protein has been biotinylated. The method allows the identification and purification of biotinylated enzymes e.g. BirA. The method is also useful in research and diagnostic applications. The method uses small but specific peptides, allowing the labelling of a protein at a defined site, this provides improved (mmobilization and avoids the use of antibodies. Y24493 to Y24548, and Y29299 to Y29312 represent specifically claimed examples of biotinylation peptides for use in the method of the invention.
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Best Local
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30-JUL-1993;
28-OCT-1997;
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                                                                                                                         Homo sapiens
                                                                                                                                                     Human; prorenin; renin; antibody; immunogen; antigen
                                                                                                                                                                                Human prorenin profragment immunogenic antigen
                                                                                                                                                                                                                                         Y79295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
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           13-OCT-1998;
                                      13-OCT-1999;
                                                                                              EP994187-A1
                                                                                                                                                                                                                                                                    Y79295 standard; Peptide; 15 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention describes a method for the identification and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Identification and biotinylation of proteins synthesized recombinant DNA techniques in vivo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-AUG-1999
                                                                                                                                                                                                           18-JUL-2000 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity nes 7; Conserv
                                                                                                                                                                                                                                                                                                19
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                                                                                                                                                                                                                                                                                                                                                      7 LSTGLD----MVGLAADW 20 : || | | : |: ||
                                                                                                                                                                                                                                                                                                                                       metgldlrpiltgmkmdw 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22 AA;
                                                                                                                                                                                                                                                                                                                                                                                                Conservative
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93US-0099991.
97US-0959512.
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                                      99EP-0308080
          98JP-0291124
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Pred. No.
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RESULT 20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This peptide is a human prorenin profragment immunogenic antigen comprising amino acid residues 27-41 of the profragment (see also 779293). The peptide was produced by solid-phase synthesis, with addition of a C-terminal Cys residue, and used to raise anti-peptide antibodies in New Zealand white rabbit. The invention provides a novel renin-active complex (I) formed from human prorenin and an anti-peptide antibody that specifically recognizes either (a) an amino acid sequence of at least 15 residues in the 33 residues between Itell and Arg43 of human prorenin profragment, or (b) an amino acid sequence comprising residues Itell-Arg26 of human prorenin profragment, or (c) an amino acid sequence comprising residues Gly27-Met41 of human prorenin profragment. In all cases, (I) may also include a second anti-peptide antibody that specifically recognises a sequence of 11 amino acids comprising Leui-Itell of human prorenin profragment. (I) is useful as a renin substitute. Greatly enhanced renin activity can be obtained by using a mixed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                                                                                                   Subtilisin; allergy; human; bacterium; protease; epitope; detergent; cosmetic; textile; pet food industry; debridement treatment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-273528/24.
                                                                                                                                                                                                                                                                                                                 B.lentus protease peptide F10.
                                                                                                                                                                                                                                                                                                                                                                             Y67045;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel renin-active complex comprising human prorenin and at least one anti-peptide antibody with specific affinity to parts of the human
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                                                       Estell D;
                                                                                                                                                                              21-OCT-1999
                                                                                                                                                                                                          W09953078-A2
                                                                                                                                                                                                                                       Bacillus lentus.
                                                                                                                                                                                                                                                                                                                                               15-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                        Y67045 standard; Peptide; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antibody
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(ISHI/) ISHIDA Y.
                                                                                                                   15-APR-1998;
                                                                                                                                                15-APR-1999;
                                                                                  (GEMV ) GENENCOR INT INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10 GLDMVGLAADW 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 gvdmarlgpew 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      consisting of equimolar amounts of anti-peptide antibodies
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                                                                                                                   98US-0060854
                                                                                                                                                99WO-US08177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Suzuki F,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 32;
Pred. No.
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Modified non-human protease having reduced allergenicity

WPI; 2000-061971/05

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This sequence is a fragment of the Bacillus lentus protease. The invention relates to protease variants comprising a substitution at least 1 of the positions in a precursor protease corresponding to K170D, Y171Q and/or S173D of the Bacillus amyloliquefaciens subtilisin. The protease variant can be used in a cleaning composition (e.g. in detergents, in bar or liquid soap application, dish-care formulations, or contact lens cleaning solutions), in animal feed and for treating textiles (e.g. treating woult opervent felting). The protease variant may also be used for peptide hydrolysis, waste treatment, cosmetic (e.g. skin care) formulations, or as fusion-cleavage enzymes in protein production. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptides Y66983-Y67070 represent peptides derived from the Bacillus lentus subtilisin protein. The peptides were used for epitope mapping of the bacterial subtilisin. The invention relates to a method of reducing the allergenicity of a non-human protein, especially a bacterial protease such as subtilisin, by identifying an epitope on the non-human protein and replacing it by an analogous region from the human protein. The method is useful for producing proteins, including proteases, that are less likely to cause allergic reactions. Thus the invention can be employed for example in detergents, cosmetics, textile treatment, and pet food industries. The human subtilisin can be used pharmaceutically
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Subtilisin; protease variant; precursor protease; cleaning compositi detergent; liquid soap application; dish-care formulation; animal fe contact lens cleaning solution; peptide hydrolysis; waste treatment;
                                                                                                                                                                                                                       New mutant proteins having lower allergenic response in humans useful in cleaning compositions, animal feed and treating textiles -
                                                                                                                                                                                                                                                                          WPI; 2000-013100/01.
                                                                                                                                                                                                                                                                                                           Estell
                                                                                                                                                                                                                                                                                                                                          (GEMV ) GENENCOR INT INC
                                                                                                                                                                                                                                                                                                                                                                            15-APR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9953038-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bacillus lentus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cosmetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Subtilisin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B. lentus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-FEB-2000
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                                                                                                                                                                                       2; Fig 6a; 43pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             formulation; fusion-cleavage enzyme; protein production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protease fragment peptide F10
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                                                                                                                                                                                                                                                                                                                                                                            98US-0060872
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                                                                                                                                                                                                                                                                                                           FA;
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Pred. No.
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21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                animal feed;
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Best Local
                       The present sequence is a fragment of the p53 binding protein WBP1, which can used to generate antibodies for the diagnosis of (pre)neoplastic diseases, and WBP1 (ant)agonists. The (ant)agonists augment or inhibit the formation of p53:WBP1 complexes and inhibit neoplasia or apoptosis, useful in the treatment of, e.g. reperfusion injury, myocardial infarction, Stroke, traumatic brain injury, neurodegenerative diseases, aging, ischaemia, toxaemia, infection, AIDS and hepatitis. The WBP1 encoding cDNA, which was isolated from a HeLa cell derived cDNA library using the yeast two-hybrid system, can be used to generate probes for the diagnosis of (pre)neoplastic pathological conditions and genetic diseases, and the forensic identification of human individuals.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                p53; binding protein; WBP1; antibody; diagnosis; treatment; neoplastic; pre-neoplastic; disease; agonist; antagonist; augmentation; inhibition; complex formation; encoplasia; apopto reperfusion; injury; myocardial infarction; stroke; AIDS; traumatic brain; neurodegenerative; aging; ischaemia; toxaemia infection; hepatitis; probe; genetic; forensic identification;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proteins (including enzymes) with reduced antigenicity may be used with significantly less danger of sensitisation for the individuals exposed. Peptides which contain epitopes responsible for initially sensitising an individual may be identified by measuring the proliferation of T-cells
                                                                                                                                                                                                                                                 New p53-binding polypeptide(s) prods. for screening assays and diseases, esp. neoplasia
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                                                                                                                                                                                                                       Claim 8; Page 38; 90pp; English.
                                                                                                                                                                                                                                                                                                                                          Bischoff JR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W09514777-A1
                                                                                                                                                                                                                                                                                                              WPI; 1995-206934/27
                                                                                                                                                                                                                                                                                                                                                                                                     22-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                  21-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fragment of p53 binding protein WBP1
                                                                                                                                                                                                                                                                                                                                                                       (ONYX-) ONYX PHARM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tragment.
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                                                                                                                                                                                                                                                                                                                                                                                                                                  94WO-US13499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein;
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Pred. No.
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d for
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                                                                                                                                                                                                                                                                   and p53UBC - used to use in diagnosis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-MAR-1995;
22-NOV-1993;
21-NOV-1994;
                                                                                                                                                                                                               The present sequence represents an immunogenic peptide from WBP1 (cellular proliferation and neoplastic transformation) polypeptide, which can be used to screen bacteriophage antibody display libraries or to immunize a rabbit. WBP1 is a p53-interacting protein that can be used to screen for agents for diagnosis or treatment of cancer and genetic diseases and for forensic identification of human individuals. The p53 protein is a nuclear phosphoprotein involved in control of cellular proliferation, and mutations in it are associated with human cancers.
Y79452;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; WBP1; p53; cancer; interacting protein; screen; diagnosis; genetic disease; forensic identification; nuclear phosphoprotein; cellular proliferation; neoplastic transformation; p53UBC; immuno
                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                             Disclosure; Column 24; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                Bischoff JR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W57351 standard; peptide; 18
                     Y79452 standard; peptide; 19
                                                                                                                                                                                                                                                                                                                                                      treatments
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human WBP1 immunogenic peptide SEQ ID NO:83.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                        (ONYX-) ONYX PHARM INC
                                                                                                                                Local Similarity
les 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                  p53-interacting protein - useful screening agents for ments of p53 related cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
5; Conserv
                                                                                                                                                                                            18 AA;
                                                                                                                                Conservative
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93US-0156571.
94WO-US13499.
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                                                                                                                                            28.4%;
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                                                                                                                                            Score 31; DB
Pred. No. 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 31; DB
Pred. No. 41;
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                                                                                                                                Mismatches
                                                                                                                                                        19;
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This sequence represents amino acids 16-34 of kynurenine aminotransferase (KAT) from a spontaneously hypertensive rat (SHR). This region of KAT carries an amino acid substitution (E27G) when compared to the corresponding region in control Wistar Kyoto (WKY) compared to the corresponding region in control Wistar Kyoto (WKY) compared to the corresponding region in control Wistar Kyoto (WKY) compared to the corresponding region in control Wistar Kyoto (WKY) compared to the corresponding region in control Wistar Kyoto (WKY) compared to the invention discloses genes whose expression is modulated in SHR rat, which is an animal model for human to control wistar to support the support and kidney tissues from SHR, stroke-prone SHR (SHR-SP) and WKY animals were analysed using GeneCalling methodology to facilitate the identification and contacterization of genes which are differentially expressed in the SHR support of the control of genes which are differentially expressed in the continuetic factor, alpha-cardiac myosin and alpha-tubulin were contacted with Myx rate. Genes encoding KAT, continuetic factor, alpha-cardiac myosin and alpha-tubulin were contacted with hypertension, so the inventor, including isolated within an SHR-SP contacted by administering kynurenic acid. The polynucleotides and polypeptides of the inventor, including isolated proteins comprising the present contacted and contacted with the schemic scale in the schemic contacted and disamoning isolated proteins comprising the present contacted and contacted with the schemic scale in the schemic contacted with the schemic contacted with the schemic scale in the schemic contacted with t
                                sequence, are used for treating, preventing and diagnosing ischemic and metabolic diseases and disorders, such as stroke, hypertension, diabetes and obesity, especially insulin resistivity, dyslipidemia and ischemic stroke (all claimed). The polynucleotides may also be used in gene therapy and antisease therapy protocols.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hypertension; stroke; diabetes; insulin resistance; obesity; dyslipidemia; anorectic; hypotensive; cerebroprotective; vasotropic; antiliabetic; antilipemic; gene therapy; diagnos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rat; kynurenine aminotransferase;
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 2; Fig 4B; 79pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel genes encoding e.g. CD36, SGLT2, and kynurenine aminotransferase, which are predictive and therapeutic for stroke, hypertension, diabetes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-303450/26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mutein; chromosome 3.
    19
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "replaces Glu in wild-type"
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full-length
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Query Match 28.4%; Best Local Similarity 46.2%; Matches 6; Conservative

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DB 43;

Length 19, Indels

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Gaps

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Mismatches

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                                                                                                                                                                                  RESULT
Y91936
                                                                                                                                                                                                                           The present sequence is hskec2 peptide, residues 153-172, a substrate cwhich was not phosphorylated by hskec2, a human serine kinase. Hskec2 is in the same supergene family as the mammmalian protein having chomologous pairing and strand transfer activities, RAD51 and was cisolated because of its homology to the homologous pairing and strand transfer protein of Ustilago maydis. In particular, hskec2 crosphorylates several proteins that control the cell cycle, especially cyclin E and p53. The invention permits the phosphorylation of cell cyclin E and p53. The invention permits the phosphorylation of cell cyclin confrol proteins at sites that are physiologically relevant. The cinvention can be practiced with either murine or human Rec2 or a mutein or chimera of these proteins. In particular the mutein has the sequence of a Rec2 kinase containing other than a Tyr at position 163. The control comprises a method of phosphorylating a serine-containing cuber than a Rec2 with ATP (adenosine criphosphate) and Rec2 kinase or a mammalian Rec2 and measuring the level of phosphorylation. The method is useful for discovering compounds which control contro
                                                   Best Local Similarity Matches 5; Conserv
                                                                                                    Query Match
                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Phosphorylating a serine-containing substrate by incubating it with adenosine triphosphate and Rec2 kinase and measuring the level of phosphorylation, useful for discovering specific antagonists or agonists of Rec2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-283562/24.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYJE-) UNIV JEFFERSON THOMAS. (CORR ) CORNELL RES FOUND INC. (KIME-) KIMERAGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-SEP-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HsRec2; serine kinase; homologous pairing; strand transfer; RAD51; phosphorylation; cyclin E; p53; cell cycle; substrate.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HsRec2 peptide residues 153-172.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Y91936 standard; Peptide; 20 AA.
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1 PRYFN 5
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                                                                                                                                                                                  20 AA;
                                                28.4%; Score 31; DB 21; ilarity 100.0%; Pred. No. 46; Conservative 0; Mismatches C
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Search completed: February 5, 2001, 10:47:34 Job time: 628 sec
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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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sp_vertebrate:*
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24.999 Million cell updates/sec
                                                                                                                              09x3f0 prochloroco
063992 rattus norv
09tqr9 mammuthus p
09zyv8 aspilota sp
09zyv7 myrmecia fo
034195 ehrlichia r
09qp62 hepatitis c
09uh4 pyrococcus
09s8k7 coptis japo
09tnpl mus sp. mhc
041588 human immun
                                   099389 ovis aries
Q9nz67 homo sapien
Q13660 homo sapien
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Q9zyw9 agathiella
Q63334 rattus norv
Q9rln0 neisseria
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Q9S630
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Matches 4; Conserv
                                                               03630 PRELIMINARY;
098630; OTTEMBLIEL 13, C
01-MAY-2000 (TIEMBLIEL 13, L
01-MAY-2000 (TIEMBLIEL 13, L
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Q9S625;
Q1-MAY-2000
Q1-MAY-2000
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NON_TER
SEQUENCE
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Urbach E., Chisholm S.W.;

Genetic diversity in Prochlorococcus sorted from the Sargasso Sea and Gulf Limnol. Oceanog. 43:1615-1630(1998).

EMBL; AF070177; AAD20793.1; -.
   PETB.
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1 VFMLMHFLMIRK 12
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33.3%;
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Q16092
Q9R5R4
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sp\_mhc:\* sp\_mammal:\* Post-processing: Minimum Match Maximum Match Listing first

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sp\_bacteria: \* sp\_archea:\*

sp\_fungi:\*

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Opps00 micropogoni Q16137 homo sapien Opmqk1 capra ibex Q94680 polyandroca Q9zyx1 diospilus s Q16092 homo sapien Q9r5r4 mycoplasma

Q9r5d0 pseudomonas Q9qv83 rattus sp. Q9prp2 gallus gall P82108 mythimna un Q9mx47 oryzias lat

Q9zyx2 centistes s Q9zy73 microplitis Q9s8e9 zea mays (m

Ogrą22 salmonella
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Q9ZYW9;
Q1-MAY-1999
Q1-MAY-1999
Q1-MAY-1999
                                                                                                063334 PRELIMINARY; PRT; 23 AA. 063334; 01-NOV-1996 (TrEMBLrel. 01, Created) 01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01:MAY-2000 (TrEMBLrel. 13, Last annotation update) ALPHA-2-MACROGLOBULIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NON_TER
                                     Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the
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01-MAY-1999 (TrEMBLrel. 10, Last annotation
CYTOCHROME OXIDASE II (FRAGMENT).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Urbach E., Curc.
Urbach E., Curc.

-----tic diversity

---- Sa)
                  NCBI_TaxID=10116;
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Dowton M., Austin
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Bacteria; Cyanobacteria;
Prochlorococcus.
PROBI_TaxID=1220;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mitochondrion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Evolutionary dynamics of a mitochondrial rearrangement 'hot spot'
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                                                                                                                                                                                                                                                                                                                                           IVLESIELKK
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5; Conserv
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Pred. No.
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                                          Murinae; Rattus
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Prochlorococcus.
NCBI_TaxTD-1777
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Urbach E., Chisholm S.W.;

"Genetic diversity in Prochlorococcus sorted from the Sargasso Sea and Gulf Limnol. Oceanog. 43:1615-1630(1998).

EMBL; AF070148; AAD20767.1; -.
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01-NOV-1999 (TrEMBLrel. 12,
01-NOV-1999 (TrEMBLrel. 12,
CYTOCHROME B (FRAGMENT).
                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10116;
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Northemann W., Helsig M., Kunz D., Heinrich P.C.;
"Molecular cloning of cDNA sequences for rat alpha 2-
measurement of its transcription during experimental
J. Biol. Chem. 260:6200-6205(1985).
EMBL; M84369; AAA41594.1;
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EMBL; M84369; AAA41594.1;
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EMBL; M84369; PARA41594.1;
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EMBL; M84369; PARAMA1594.1;
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SEQUENCE FROM N.A. MEDLINE=94271262; PIimura T., Oida S.,
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   PubMed=7911662;
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Rodentia;
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Pred. No. 9.4e+02;
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Sciurognathi;
      Maruoka
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thi; Muridae;
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al inflammation.
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01-MAY-1999
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01-MAY-2000
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01-MAY-1999 (TrEMBLrel. 10, Last sequence up
01-MAY-1999 (TrEMBLrel. 10, Last annotation
CYTOCHROME OXIDASE II (FRAGMENT).
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SEQUENCE
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EMBL; AF154874; AAF12750.1; -.
EMBL; AF154873; AAF12749.1; -.
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                                          Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Hymenoptera; Apocrita; Ichneumonoidea; Braconidae; Alysiinae; Aspilota.
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Mammalia; Eutheria;
NCBI_TaxID=37349;
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PFAM; PF00046; homeobox; 1.
Homeobox; DNA-binding; Nuclear
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EMBL; S71317; AAB31008.1;
HSSP; P02833; 9ANT.
SEQUENCE FROM N.A. MEDLINE-99152621;
                                                                                       Aspilota sp.
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Eukaryota: Metazoa: Chordata: Craniata: Vertebrata:
Mammalia: Eutheria: Proboscidea: Elephantidae: Mammu
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                                 NCBI_TaxID-61200;
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AND FACTOR (FRAGMENT).
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D; Mismatches 4
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O34195;
01-JAN-1998 (TrEMBLrel. (
01-JAN-1998 (TrEMBLrel. (
01-MAY-2000 (TrEMBLrel. 1
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MEDLINE-97373904; PubMed-9230387;
Sumner J.W., Nicholson W.L., Mass
"PCR amplification and comparison
                                                    Ehrlichia risticii.
Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
Rickettsiaceae; Ehrlichieae; Ehrlichia.
NCBI_TaxID-950;
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Pterygota; Neoptera; Endo
Formicoidea; Formicidae;
NCBI_TaxID=32387;
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Mol. Biol. Evol. 16:298-309(1999).
EMBL; AF034603; AAC79751.1;
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                                                                                                         GROES. (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                            the Hymenoptera.";
Mol. Biol. Evol. 16:298-309
EMBL; AF034604; AAC79752.1;
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MEDLINE-99152621; PubMed-10028295;
Dowton M., Austin A.D.;
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Mitochondrion.
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"Evolutionary dynamics of a mitochondrial rearrangement 'hot
                                  SEQUENCE FROM N.A.
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Neoptera; Endopterygota; Hymenoptera; Apocrita; Ac
a; Formicidae; Myrmecia.
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J. Clin. Microbiol.
EMBL; U96732; AAB656
INTERPRO; IPR001476;
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01-MAY-2000
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01-MAY-2000
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MEDLINE-96146528; PubMed-8550513;
Heider J., Mai X., Adams M.W.;
"Charracterization of 2-ketoisovalerate ferredoxin oxidor new and reversible coenzyme A-dependent enzyme involved fermentation by hyperthermophilic archaea.";
J. Bacteriol. 178:780-787,1996).
SEQUENCE 15 AA; 1727 MW; 42363C008C8A9CFA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A., Du Y., Wang H.T.;
Leng Y., Chen X.Z., Du Y., Wang H.T.;
Cloning of NS2 cDNA of Hepatitis C virus (HCV) and comp
quasispecies in a HCV carrier";
Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AFIT5472; AAD50790.1;
SEQUENCE 25 AA; 2637 MW; 5684D08FA4DAC202 CRC64;
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SEQUENCE 22 AA; 25
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NCBI_TaxID=2260;
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Archaea; E
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Hepatitis C virus.
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Eur. J. Biochem. 22
Eur. 15 AA;
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01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2000 (TrEMBLrel. 14, Last annotation update)
01-JUN-2000 (TrEMBLrel. 14, Last annotation update)
MHC CLASS II H 2EK NATURAL LIGAND (FRAGMENT).
                                                                                                       Int. Immunol.
MHC.
SEQUENCE 18
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O9S8K7,

O1-MAY-2000 (TrEMBLrel. 13, Created)

O1-MAY-2000 (TrEMBLrel. 14, Last sequence update)

O1-JUN-2000 (TrEMBLrel. 14, Last annotation update)

S-ADENOSYL-L-METHYDINE:NORCOCLAURINE 6-O-METHYLTRANSFERASE,

NORCOCLAURINE 6-O-METHYLTRANSFERASE (EC 2.1.1.-) (FRAGMENT).

Coptis japonica (Japanese goldthread).

Coptis japonica (Japanese goldthread).

Coptis japonica (Japanese goldthread).

Coptis japonica (Japanese goldthread).
                                                                                                                              MEDIINE-96360157; PubMed-8746565;
Schild H., Gruneberg U., Pougialis G., Wallny
Stevanovic S., Rammensee H.G.;
Stevanovic S., Rammensee H.G.;
"Natural ligand motifs of H.ZE molecules are
Illustrate homology to HLA-DR molecules.";
Int. Immunol. 7:1957-1965(1995).
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Mammalia; Eutheria;
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Sato F., Tsujita T., Katagiri Y., Yoshida
"Purification and characterization of S-a
norcoclaurine 6-O-methyltransferase from
                                                                                                                                                                                                                             NCBI_TaxID=10095;
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Rodentia;
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ATPASE SUBUNIT 6 (FRAGMENT).
OVIS aries (Sheep).
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GONDOR R.I., Korber B.T.M., Graham B.S., Hahn B.H., Ho D.D.,

CONDOR R.I., Korber B.T.M., Graham B.S., Hahn B.H., Ho D.D.,

Walker B.D., Neumann A.U., Vermund S.H., Mestecky J., Jackson S.,

Wealler B.D., Neumann A.U., Vermund S.H., Mestecky J., Jackson S.,

Fenamore E., Cao Y., Gao F., Kalams S., Kunstman K.J., McDonald D.,

McWilliams N., Trkola A., Moore J.P., Wollnsky S.M.;

"Immunological and virological analyses of persons infected by human

immunodeficiency virus type 1 while participating in trials of

recombinant gp120 subunit vaccines.";

J. Virol. 72:1552-1576(1998).

EMBL; Ud4837; AAC58876.1;

INTERPRO; IPR000777;

FFAM; PF00516; GP120; 1.
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01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
ENVELOPE GLYCOPROTEIN (FRAGMENT).
                                                                                                                             Mitochondrion.
NON_TER 22
SEQUENCE 22 AA;
                                                                                                                                                                                                       "Rapid communication: nucleotide sequence of trNA(Lys) and ATPase8 mitochondrial genes."; J. Anim. Sci. 76:2207-2208(1998). EMBL; AF039171; AAD05068.1;
                                                                                                                                                                                                                                                                                                                 TISSUE-PERIPHERAL BLOOD;
MEDLINE-98403943; PubMed-9734874;
Tartaglia M., Saulle E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea Bovidae; Caprinae; Ovis.
NCBI_TaxID-9940;
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Viruses; Retroid viruses; Retroviridae;
NCBI_TaxID=11676;
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  Similarity 46. 6; Conservative
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2453 MW;
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                        24.28;
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Score 24; DB 8;
Pred. No. 2.8e+03;
2; Mismatches
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Pred. No.
                                                                                                                                  215FF87BDF0EA1C8 CRC64;
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2.3e+03;
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Q9NZ67;
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Q13660;
Q1-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NOV-1998 (TrEMBLrel. 08, Last annotation update)
MANNOSE 6-PHOSPHATE/INSULIN-LIKE GROWTH FACTOR-II RECEPTOR
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EMBL; AF21
                                                                                                                                                            Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID-9606;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                              SEQUENCE FROM N.A.
MEDLINE-96083596; PubMed-7493029;
De Souza A.T., Hankins G.R., Washing
"M6P/IGF2R gene is mutated in human
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
Wu Z.Y., Wang N., Murong S.X.;
"Missense mutations of exons 1
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7 VEVLLEYV 14
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                                                                                            of heterozygosity.";
Genet. 11:447-449(1995).
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                  Similarity
4; Conserv
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354; AAF25685.1; -.
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01-MAY-2000 (TIEMBLTel. 13,
01-MAY-2000 (TIEMBLTel. 13,
01-MAY-2000 (TIEMBLTel. 13,
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SEQUENCE
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EMBL, AJ012726; CAA10149.1; -...
                                                                                                                                                                                                             Mitochondrion.
                                                                                                                                                                                                                                                   Saulle E., Di Pasquale S., Tartaglia M.;
"Rapid communication: nucleotide sequence of
red deer tRNA(Lys) and ATPasse mitochondrial
J. Anim. Sci. 77:3398-3399(199).
EMBL; AF104681; AAF43479.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eute.
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora;
Bovidae; Caprinae; Rupicapra.
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MEDLINE=20104876; PubMed=10641890;
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Bacteria; Proteobacteria;
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illarity 46.2
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3.2e+03;
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Robison K.;
Robison K.;
Submitted (SEP-1994) to t
SMBL; UI5183; AAA63011.1;
SMOTIENCE 18 AA; 2183)
Q9ZYX0;
Q9ZYX0;
01-MAY-1999
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01-NOV-1996
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Q28200;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
Bovidae; Bovinae; Bos.
NCBI_TaxID-9913;
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01-NOV-1996 (TIEMBLIEL. 01, Last sequence update)
01-NOV-1998 (TIEMBLIEL. 08, Last annotation update)
TYROSINASE-RELATED PROTEIN-1 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                               Smith D.R
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NCBI_TaxID=1769;
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MEDLINE-96314791; PubMed-
Nonneman D., Shibuya H.,
NA BStUI PCR/RFLP in the
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Corynebacterineae; Mycobacteriaceae; Mycobacterium
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01-MAY-2000
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MEDLINE-99152621; Pubmed-10028295;
Dowton M., Austin A.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
NCBI_TaxID-10090;
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Mitochondrion.
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Mol. Biol. Evol. 16:298-309(1999).
EMBL; AF034591; AAC79739.1; -.
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"Genomic subtractive hybridization and selective capture of
"transcribed sequences identify a novel Salmonella typhimurium fimbrial
operon and putative transcriptional regulator that are absent from the
Salmonella typhi genome.";
Infect. Immun. 67:5106-5116(1999).
EMBL; AF134977; AAD54116.1; -.
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NCBI_TaxID=601;
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Salmonella typhi.
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Pred. No. 3.4e+03;
3; Mismatches 4
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Result
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Maximum Match 100%
Listing first 45 summaries
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Match
   February 5, 2001, 10:56:02; Search time 32.57 Seconds (without alignments) 19.831 Million cell updates/sec
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Gapop 10.0 , Gapext 0.5
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Copyright (c) 1993 - 2000 Compugen Ltd.
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     DB
AMF_TRISP

AMF_FUSAU

MDH_THEAL

PSAJ_SPIOL

PSAJ_SPIOL

PA22_BOTSC

CIP1_MYTED

ULA4_HUMAN

UN04_CLOPA

MIF_PIG

SUCB_CANFA

NUO7_SOLTU

VGLG_RABVA

ATPY_SOLTU

VGLG_RABVA

ATPY_SOLTU

VGLG_RABVA

ATPY_SOLTU

VGLG_RABVA

ATPY_SOLTU

VGLG_RABVA

ATPY_SOLTU

VGLG_RABVA

ATPY_SOLTU

OCNS_BRAJA

MILT_ONCKE

UC17_MAIZE

ALL2_CYDPO

AROQ_AMYME

CPXX_RHORH

GTS2_ASCSU

GTS2_ASCSU

GTS2_ASCSU

GTS2_ASCSU

GTS1_LITXA

COMS_PECA

CR17_LITXA

CN17_LITXA

CN17_LITX
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P17229
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rhodococcus
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YCX8_OI AC DT 01 DT 01 D	Query Ma Best Loo Matches Oy 5		2 9	444443333333 444440987 544321
DOSI STANDARD; PRT; 25 AA. 19834; 19834; 1-OCT-1996 (Rel. 34, Created) 1-OCT-1996 (Rel. 34, Last sequence update) 1-OCT-1996 (Rel. 34, Last annotation update) 1-OCT-1996 (Rel. 34, Last sequence update) 1-OCT-1996 (Rel. 34, Created) 1-OCT-1996 (Rel. 34, Last sequence update) 1-OCT-1996 (Rel. 34, Last sequence update) 1-OCT-1996 (Rel. 34, Created) 1-OCT-1996 (Rel. 34, Created) 1-OCT-1996 (Rel. 34, Last sequence update) 1-OCT-1996 (Rel. 34, Created) 1-OCT-196 (Rel. 34, Cr	ery Match 22.2%; Score 22; DB 1; Length 6; st Local Similarity 80.0%; Pred. No. 8.9e+04; tches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 5 APVFV 9 1	CONTRACTION-INHIBITING PEPTIDE II (MIP II).  Mythlus edulis (Blue mussel).  Eukaryota; Metazoa; Mollusca; Bivalvia; Pteriomorphia; Mythloida;  Mythloidea; Mythlusca; Bivalvia; Pteriomorphia; Mythloida;  Mythloidea; Mythlusca; Bivalvia; Pteriomorphia; Mythloida;  Mythloidea; Mythlusca;  SEQUENCE.  TISSUE-PEDAL GANGLION;  MEDLINE-88240357; PubMed-3377776;  MEDLINE-88240357; PubMed-3377776;  MILIARIE-88240357; PubMed-3377776;  MILIARIE-88240357; PubMed-3377776;  MILIARIE-88240357; PubMed-3377776;  MUSCLES:  -1- FUNCTION: INHIBITORY ACTION ON CONTRACTIONS IN SEVERAL MOLLUSCAN  MUSCLES:  -1- FUNCTION: INHIBITORY ACTION ON CONTRACTIONS IN SEVERAL MOLLUSCAN  MUSCLES:  -1- SIMILARITY: TO MIP I.  PIR: B27696; B27696.  MODLRES 6 6AA; 621 MM; 72C9C6876DD81000 CRC64;	ALIGNMENTS  1 1 1 1P2_MYTED STANDARD; PRT; 6 AA 13737; 1-JAN-1990 (Rel. 13, Created) 1-JAN-1990 (Rel. 13, Last sequence update)	4 17.5 17.7 24 1 THD2_SALTY 5 17 17.2 10 1 TMOF_AEDAE 6 17 17.2 12 1 TM2A_METMA 6 17 17.2 12 1 TM2A_METMA 7 17.2 13 1 OPPA_CANFA 7 17.2 14 1 LPM_ECOLI 9 17 17.2 14 1 LPM_ECOLI 17 17.2 15 1 ACEA_ACICA 17 17.2 15 1 KLOM_LUMTE 17 17.2 15 1 W14_MAIZE 17 17.2 15 1 UC14_MAIZE 18 17 17.2 15 1 UC14_MAIZE 19 17 17.2 15 1 UC14_MAIZE 2 17 17.2 15 1 UC14_MAIZE 3 17 17.2 16 1 PGTL_PELAC 4 17 17.2 16 1 UPAB_HUMAN 5 17 17.2 17 1 APID_BOMPA 6 17 17.2 17 1 APID_BOMPA
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Best Local :
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                                                                                  01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
UNKNOWN PROTEIN FROM 2D-PAGE OF ETIOLATED COLEOPTILE
                                                                                                                                                                                         UC20_MA
P80626;
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SEQUENCE
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MOTI_C
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the Euro
  Zea mays (Maize).
Eukaryota; Viridiplantae;
Magnoliophyta; Liliopsida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-INTESTINE;

MEDILINE-83195948; Pubmed-6844663;

Poitras P., Reeve J.R. Jr., Hunkapiller M.W., Hood L.E.,

Poitras P., Reeve J.R. Jr., Hunkapiller M.W., Hood L.E.,

"Purification and characterization of canine intestinal m

Regul. Pept. 5:197-208(1983).

-i- FUNCTION: PLAYS AN IMPORTANT ROLE IN THE REGULATION O-

INTERDIGESTIVE GASTROINTESTINAL MOTILITY AND INDIRECT

RHYTHMIC CONTRACTION OF DUODENAL AND COLONIC SMOOTH M

-i- SUBCELLULAR LOCATION: SECRETED.

-i- SUBLIARITY: BELONGS TO THE MOTILIN FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIR; A60313;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; (
Mammalia; Eutheria; Carnivora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-FEB-1991
15-JUL-1998
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                                                                             (FRAGMENT)
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                                                                                                                                                                                                              MAIZE
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4; Conserv
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(Rel. 17, Last sequence up)
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A60313.
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5 AA; 3083 MW; 9F50BB79484EA531 CRC64;
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           Embryophyta; Tracheophyta; Poales; Poaceae; Zea.
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Pred. No. 1.9e
3; Mismatches
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Pred. No. 1.8e
3; Mismatches
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                                                                                                                                                                                                                 PRT;
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1.8e+03;
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.9e+03;
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Appl. Genet. 93:997-1005(1996).

-j. MISCELLANBOUGS: ON THE 2D-GEL THE DE PROTEIN IS: 6.1, ITS MW IS: 45.3 KD; 20.1 C. SIMILARITY: TO ADOMET SYNTHETASES.

R MAIZE-2DPAGE; P80626; COLEOPTILE.

R MAIZEDB; 123952; -. 1

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Matches 4
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AMP_FUSNU
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15-JUL-1998
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NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pennock J.L., Behnke J.M., Bickle Q.D., Devaney E., Grencis R.K., Isaac R.E., Joshua G.W.P., Selkirk M.E., Zhang Y., Meyer D.J.; Isaac R.E., Joshua G.W.P., Selkirk M.E., Zhang Y., Meyer D.J.; Repid purification and characterization of L-dopamine-methyl-ester tautomerase (macrophage migration inhibitory factor) from Trichinella spiralis, Trichuris muris and Brugia pahangi."; Bricharls Trichuris muris and Brugia pahangi."; Biochem. J. 335:495-498(1998).

1- FUNCTION: TAUTOMERIZATION OF THE METHYL ESTER OF L-DOPACHROME.

1-1- INDUCTION: INHIBITED BY FREE FATTY ACIDS AND HAEMATIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MIFH_TRISP STANDARD; PRT; 19 AA.
P81529;
15-JUL-1999 (Rel. 38, Created)
15-JUL-1999 (Rel. 38, Last sequence update)
01-OCT-2000 (Rel. 40, Last annotation update)
L-DOPACHROME_METHYL_ESTER_TAUTOMERASE (MACROPHAGE MIGRATION INHIBITORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Trichinella spiralis.
Eukaryota; Metazoa; Nematoda; Enoj
Trichocephalina; Trichinelloidea;
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Pernollet J.-C., Zivy M., de Vienne D.;
"The maize two dimensional gel protein database:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INTERPRO; IPKUULJUU, ... PARTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
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SEQUENCE.
TISSUE-COLEOPTILE;
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dea; Trichinellidae; Trich
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RESULT 8
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P17230;
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-!- FUNCTION: CLEAVES A WIDE RANGE OF DIPEPTIDES AND
-!- COFACTOR: COBALT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-DEC-1998 (Rel. 37, La AMINOPEPTIDASE (EC 3.4.1 Fusobacterium nucleatum.
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Rogers A.H., Gunadi A.,
                                                                                                                                                                                                                                                                                             album NM.";
Arch. Microbiol. 154:304-307(1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleatum.'
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                                                                                                                                                                                                     Oxidoreductase; Tricarboxylic
                                                                                                                                                                                                                                                                                                                                                                                                           01-0CT-1993 (Rel. 27, Created)
01-0CT-1993 (Rel. 27, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
MALATE DEHYDROGENASE (EC 1.1.1.37) (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hydrolase; Aminopeptidase;
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Bacteria; Green
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                                                                                                                                                                                                                                                                                                                   Characterization
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- SUBULAT: HOMODIMER.
- SIMILARITY: BECLORGS TO THE LDH
IR; A60689; A60689.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LINE-98361026; PubMed-9695913;
ers A.H., Gunadi A., Gully N.J., Zilm P.S.;
aminopeptidase nutritionally important to Fusobacterium
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                                                                                                                                                Similarity
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non-sulfur
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C 3.4.11.-) (AP) (FRAGMENT).
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sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Spinacia oleracea (Spinach).
Chloroplast.
                                                              PFAM; PF00068; phoslip; 1.
PROSITE; PS00118; PA2_HIS;
PROSITE; PS00119; PA2_ASP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-90242987; PubMed-2185953; Inoue Y.; Ikeuchi M., Hirano A., Hiyama T., Inoue Y.; "Polypeptide composition of higher plant ph Identification of psaI, psaJ and psaK gene FEBS Lett. 263:274-278(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Caryophyllidae; Caryophyllales; Chenopodiaceae; Spinacia.
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SEQUENCE,
                                                                                                                                                                                                                                                                                      "Isolation and characterization of a myotoxic phospholipase A2 fr
the venom of the arboreal snake Bothriechis (Bothrops) schlegelii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lepidosauria; Squamata; Scleroglossa; Serpentes;
Viperidae; Crotalinae; Bothriechis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -I- SIMILARITY: BELONGS
PIR; S09732; S09732
                                                                                                                        PFAM; PF00068;
                                                                                                                                                                                                                                           Arch.
                                                                                                                                                                                                                                                               from Costa Rica."
                                                                                                                                                                                                                                                                                                                                                               Angulo Y.,
                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-97209510;
                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-VENOM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                         NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hloroplast; Photosystem I;
                                               oxin; Venom;
                                                                                                                                                                  SSP; P24605; 1CLP
                                                                                                                                                                                                                     - FUNCTION: THIS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity 62.15; Conservative
                                                                                                                                              IPR001211;
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16
16 AA;
  25
                                                                                                                                                                                                                                                                                                                                                                 Chaves
                                             Multigene family.
                                                                                                                                                                                                                     Biophys. 339:
THIS MYOTOXIC
                                                                                                                                                                                            BELONGS
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                                                                                                                                                                                                                                                                                                                                                                                     PubMed-9056257;
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1851 MW;
     2725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19.7%;
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     MW;
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                                                                                                                                                                                                                     339:260-266(1997)
OXIC PROTEIN LACKS
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                                                                        PARTIAL.
                                                                                                                                                                                         THE PHOSPHOLIPASE A2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Photosynthesis; POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 19.5; D
Pred. No. 2.1e
1; Mismatches
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     C578AB09235EA02A CRC64;
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                                                                                                                                                                                                                                                                                                                                                                 Rucavado A., Gutierrez J.M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
IX (PSI-J) (FRAGMENT)
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products.";
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ULA4_HUMAN
                                                                                Query Match
Best Local S
Matches 2
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Best Local S
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P13736;
01-JAN-1990
01-JAN-1990
15-DEC-1998
                                                                                                                                                                                                                                                 SWISS-2DPAGE; P3
NON_TER 14
SEQUENCE 14 AA
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01-APR-1993 (Rel. 25, Last sequence update)
01-JUL-1993 (Rel. 26, Last annotation update)
UNKNOWN PROTEIN FROM 2D-PAGE OF LIVER TISSUE (SPOT 32) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MYTED
                                                                                                                                                                                                                                                                                                                                                                                                                      "Human liver protein map: a reference microsequencing and gel comparison."; Electrophoresis 13:992-1001(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-93162045; PubMed-1286669;
Hochstrasser D.F., Fruttger S., Paquet N.,
Pasquali C., Sanchez J.-C., Tissot J.-D., 1
Appel R.D., Hughes G.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ULA4_HUMAN
P30039;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIR;
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Eukaryota; Metazoa; Mollusca; Bivalvia; Pteriomorphia; Mytiloida;
Mytiloidea; Mytilidae; Mytilus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update
CONTRACTION-INHIBITING PEPTIDE I (MIP I).
, 6 PVFV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE-LIVER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hormone; Amidation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE-PEDAL GANGLION;
MEDLINE-88240357; PubM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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"Structures and actions of Mytilus inhibitory peptides.";
Biochem. Biophys. Res. Commun. 152:1376-1382(1988).
-i- FUNCTION: INHIBITORY ACTION ON CONTRACTIONS IN SEVERAL MOLLUSCAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE.
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                                                                                                                                                                                                                                                                                                                                                   MISCELLANEOUS: ON THE 2D-GEL PROTEIN IS: 6.2, ITS MW IS: 2
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                                                                                Similarity
2; Conserv
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                                                                                                                                                                                                                                                 14 AA;
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                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                    S: 6.2, ITS MW IS: P30039; HUMAN.
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                                                                                                                                                                                                                                                        1614 MW;
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72C9C68775B81000 CRC64;
                                                                                Score 19; DB
Pred. No. 2.26
2; Mismatches
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Pred. No. 8.9e
2; Mismatches
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                                                                                                                                                                                                                                                                                                                                                       THE DETERMINED 28 KDA.
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                                                                                                                DB 1;
2.2e+03;
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8.9e+04
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Best Local Similarity 50.0
"""+" 6 Conservative
Query Match
Best Local Similarity
Matches 3; Conserv
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P81349;
15-JUL-1998 (Rel. 3
15-JUL-1998 (Rel. 3
15-JUL-1998 (Rel. 3
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P80928;
                                                                                                                         Macrophage; Inflammatory response; NON_TER 20 20 SEQUENCE 20 AA; 2147 MW; 3517AH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
MACROPHAGE MIGRATION INHIBITORY FACTOR (MIF)
FACTOR) (GIF) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Two-dimensional gel electrophoresis separation and N-terminal sequence analysis of proteins from Clostridium pasteurianum W5 Electrophoresis 19:802-806(1998)
-i- MISCELLANEOUS: ON THE 2D-GEL THE DETERMINED PI OF THIS UNK PROTEIN IS: 4.7, ITS MW IS: 45.7 KDA.
                                                                                                                                                                                                                                                                                                                                          Clostridium pasteurianum.
Bacteria; Firmicutes; Bacillus/Clostridium group;
                                                                                                                                                                                                                                                                    -1- SUBUNIT: HOMOTRIMER (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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MEDLINE-98291870; PubMed-9629918;
                                                                                                                                                                                               INTERPRO; IPR001398; -.
PROSITE; PS01158; MIF; PARTIAL.
                                                                                                                                                                                                                                                                                             IN HOST DEFENSE (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sus scrofa (Pig).
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                                                                                                                                                                                                                                                P14174; 1MIF
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         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36, Last sequence update)
36, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1608 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata; Craniata; Vertebrata; Cetartiodactyla; Suina; Suidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19.2%;
                             19.2%;
    Score 19; DB Pred. No. 3.2e 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                D424A7069460EBD2 CRC64;
                                                                                                                              3517AF60F3012A61 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 19; DB 1;
pred. No. 2.2e+03
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (FRAGMENT).
                                                                                                                                                                        Cytokine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14
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                                DB 1;
3.2e+03;
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                                                                                                                                                                                                                                                                                                                                            THE FUNCTION OF MACROPHAGE
                                                                                                                                                                                                                                                                                                                                                                       OF INFLAMMATION SUGGEST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GLYCOSYLATION-INHIBITING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 14;
                                                    Length 20
         Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostomi;
Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        THIS UNKNOWN
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Best Local S
Matches 3
Herz U., Grohmann L.;

Submitted (DEC-1996) to the SWISS-PROT data bank.

-i- FUNCTION: TRANSFER OF ELECTRONS FROM NADH TO THE RESPIRATORY CHAIN. THE IMMEDIATE ELECTRON ACCEPTOR FOR THE ENZYME IS BEL:

TO BE UBIQUINONE.

-i- CATALYTIC ACTIVITY: NADH + UBIQUINONE = NAD(+) + UBIQUINOL.

-i- SUBUNIT: COMPLEX I IS COMPOSED OF ABOUT 30 DIFFERENT SUBUNIT:

-i- SUBCELLULAR LOCATION: MATRIX SIDE OF THE MITOCHONDRIAL INNER
                                                                                                                                                                                                                                                                                                                                               _SOLIU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-98163340; PubMed-9504812;
Dunn M.J., Corbett J.M., Wheeler C.H.;
"HSC-2DPAGE and the two-dimensional gel electrophoresis database
dog heart proteins.";
Electrophoresis 18:2795-2802(1997).
-!- CATALYTIC ACTIVITY: SUCCINATE + COA + GTP - SUCCINYL-COA + GD
                                                                                                                                                                      Solanum tuberosum (Potato).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta;
Magnoliophyta; eudicotyledons; core eudicots; Asterid
Solanales; Solanaceae; Solanum.
                                                                                                                                                                                                                             01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
01-NOV-1997 (Rel. 35, Last annotation update)
NADH-UBIQUINONE OXIDOREDUCTASE 16 KDA SUBUNIT (EC 1.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
15-JUL-1999 (Rel. 38, Last annotation update)
PUTATIVE SUCCINYL-COA LIGASE [GDP-FORMING] BETA-CHAIN (EC 6.2.1.4)
[SUCCINYL-COA SYNTHETASE, BETA CHAIN) (SCS-BETA) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Ve
Mammalia; Eutheria; Carnivora; Fissipedia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUCB_CANFA P99507;
                                                                                                                            STRAIN-CV. BINTJE; TISSUE-TUBER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -1- SUBUNIT: HETERODIMER OF AN ALPHA AND A BETA CHAIN (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- PATHWAY: SUBSTRATE LEVEL PHOSPHORYLATION STEP OF THE TRICARBOXYLIC
                                                                                                                                              SEQUENCE.
                                                                                                                                                                                                                                                                                                                NUO7_SOLTU
P80730;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ligase;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Canis familiaris (Dog).
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SIMILARITY: TO OTHER BETA SUBUNITS OF SUCCINYL-COA SYNTHETASE,
OF MALATE--COA LIGASE AND TO ATP CITRATE-LYASE.

--2DEAGE; P99507; DOG.
ERPRO; IPR000303; -.
SITE, PS01217; SUCCINYL_COA_LIG_3; PARTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORTHOPHOSPHATE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                   LLEYVTLKKMR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Glycolysis; Tricarboxylic acid cycle:
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3; Conserv
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Pred. No.
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. 3.2e+03;
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ia; Canidae;
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                                                                                                                                                                                      Asteridae;
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                                                                                                                                                                                                                                                  (EC 1.6.5.3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 20;
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                                                               ENZYME IS BELIEVED
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Canis.
                                                                                                                                                                                       Spermatophyta;
dae; euasterids
                    SUBUNITS.
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RESULT
ATPY_SC
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VGLG_RA
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Best Local
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Best Local
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                                                                                     X_SOLTU STANDARD

ATPX_SOLTU STANDARD

P80497;

01-FEB-1996 (Rel. 33, C

01-FEB-1996 (Rel. 33, L

01-NOV-1997 (Rel. 35, L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Oxidoreductase;
NON_TER 22
SEQUENCE 22 AA
             U1-FEB-1996 (Rel. 33, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
ATP SYNTHASE 6 KDA SUBUNIT, MITOCHONDRIAL (EC
Solanum tuberosum (Potato).
BUKATYOta; Viridiplantae; Embryophyta; Trachec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VGLG_RABVA
P15199;
01-APR-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; X13357; CAA31737.1; PIR; S07817; S07817.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Poch O., Tordo N., Keith G.;
"Sequence of the 3386 3' nucleotides of the rables virus: structural similarities in the in transcription.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rhabdoviridae; Lyssavirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rabies virus (strain AVO1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SPIKE GLYCOPROTEIN PRECURSOR (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-APR-1990
01-APR-1990
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochimie 70:1019-1029(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=89150295; PubMed=3147698;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ransmembrane;
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4; Conservative
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(Rel. 14, Last sequence update)
(Rel. 14, Last annotation update)
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                                                                                                                                                                                  STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein; Glycoprotein; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .'
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Pred. No. 3.5e+03;
1; Mismatches 0
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Pred. No. 3
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3.5e+03;
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                                                                   3.6.1.34)
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Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Magnollophyta; eudicotyledons; core eudicots; Rosidae; eurosids.I; Fabales; Fabaceae; Papilionoideae; Pisum.
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Jansch L., Kruft V., Schmitz U.K., Braun H.P.;
Jansch L., Schmitz U.K., Braun H.P.;
Plant J. 9:357-388(1996).
Plant J. 9:357-388(1996)
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Chloroplast; Photosystem
6 >13
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I REACTION CENTRE SUBUNIT IX (PSI-J) (FRAGMENT).
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                                                                                                                                            STANDARD;
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-i- FUNCTION: NOT KNOWN Y
-i- COFACTOR: PYRIDOXAL P
-i- SIMILARITY: BELONGS T
AMINOTRANSFERASES.
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P37030;
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                                                                                   EMBL; X13691;
PIR; S04875; S
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the European Bioinformatics Institute,
use by non-profit institute.
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Margadyrhizobium japonicum.
Bacteria; Proteobacteria; alpha subdivision; Rhizobiaceae group;
Baradvrhizobium group; Bradyrhizobium.
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                                                                                                                                                                           use by non-profit institutions as long modified and this statement is not removed entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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01-JUN-1994 (Rel.
01-JUN-1994 (Rel.
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-I- FUNCTION: BINDS TO CPN60 IN THE PRESENCE OF MG-ATP AND SUPPRE THE ATPASE ACTIVITY OF THE LATTER (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bacteria;
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                                                                   ps00595; AA_TRANSFER_CLASS_5;
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29, Last sequence up
29, Last annotation
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    1308 MW;
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Pred. No. 3.
    09F0BB69476DC404 CRC64;
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Zea mays (Maize).
Eukaryota; Viridiplantae; F
Eukaryota; Liliopsida;
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SEQUENCE
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Comp. Biochem. Physiol. 117B:445-452(1997).
-i- FUNCTION: CYSTEINE PROTEINASE THAT HYDROLYSES BASIC PROTEINS SUCH AS HISTONE, SALMINE HYDROLYZE BASIC PROTEINS SUCH AS HISTONE, SALMINE
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01-NOV-1997 (Rel. 35, Last sequence upda
01-S-DEC-1998 (Rel. 37, Last annotation up
MILTPAIN (EC 3.4.22.-) (FRAGMENT).
Oncorhynchus keta (Chum salmon).
Eukaryota; Metazoa; Chordata; Craniata;
Actinopterygii; Neopterygii; Teleostei;
MAIZEDB;
                                                                                                              Touzet P., Riccardi F., Morin C., Damerval Pernollet J.-C., Zivy M., de Vienne D.;
"The maize two dimensional gel protein data genome analysis program."
Theor. Appl. Genet. 93:997-1005(1996).
"Theor. Appl. Genet. 93:997-1005(1996)."
"Theor. A
                                                                             MAIZE-2DPAGE; P80623; COLEOPTILE
                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-COLEOPTILE;
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RESULT 23
ALL2_CYDPO
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AROQ_AMYME STANDARD; FAL,

P46380;

01-NOV-1995 (Rel. 32, Created)

01-NOV-1995 (Rel. 32, Last sequence update)

30-MAY-2000 (Rel. 39, Last annotation update)

3-DEHYDROQUINATE DEHYDRATASE (EC 4.2.1.10) (3-DEHYDROQUINASE)

3-DEHYDROQUINATE DEHYDROATASE (EC 4.2.1.10)
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P82153;
30-MAY-2000
30-MAY-2000
30-MAY-2000
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SEQUENCE
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TISSUE-LARVA;
MEDLINE-98054539; PubMed-9392829;
Dave H., Johnsen A.H., Maestro J.
Davey M., East P.D., Thorpe A.;
Davey M., East P.D., Thorpe A.;
"Purification and characterization of a dual function 3-dehydroquinate dehydratase from Amycolatopsis methanolica. J. Gen. Microbiol. 138:249-2457(1992).
-i- FUNCTION: CATALYZE A TRANS-DEHYDRATION VIA AN ENOLATE INTERMEDIATE. IS INVOLVED IN BOTH THE CATABOLISM OF QUIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cydia pomonella (Codling moth).

Cydia pomonella (Codling moth).

Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;

Pterygota; Neoptera; Endopterygota; Lepidoptera; Glossata; Di
mortricoidea; Tortricidae; Olethreutinae; Cydia.
                                                                                                          STRAIN-NCIB 11946;
MEDLINE-93123995;
                                                                                                                                                                                  Amycolatopsis methanolica.
Bacteria; Firmicutes; Actinobacteria; Actinobacteridae; Actinomycetales; Pseudonocardineae; Pseudonocardiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Neuropeptide; Amidation.
MOD_RES 18 18
SEQUENCE 18 AA; 2169 N
                                                                             Euverink G.J.W., Hessels Dijkhuizen L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CYDIASTATIN
                                                                                                                                          SEQUENCE
                                                                                                                                                                       Amycolatopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Lepidopteran peptides of 1
Peptides 18:1301-1309(1997)
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3; Conservative
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                                                                                          PubMed=1479361;
Hessels G.I., Vrijbloed J.W.,

    Created)
    Last sequence up
    Last annotation

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2169 MW;
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Pred. No. 3.5e
1; Mismatches
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Pred. No.
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4.3e+03;
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3.5e+03;
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CPXX_RHORH
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Best Local Similarity 22.3
Matches 2; Conservative
                                                                                                                                                                                                                                                                    STRAIN=116;
MEDLINE-93238689; PubMed=8477696;
Eltis L.D., Karlson U., Timmis K.N.;
"Purification and characterization of cytochrome P450RR1 from
Rhodococcus rhodochrous.";
Eur. J. Biochem. 213:211-216(1993).
Eur. J. Biochem. 213:211-216(1993).
-i- FUNCTION: P450-RRI CATALYZES THE O-DEALKYLATION OF 2-ETHOXYPHENOL
AND 2-METHOXYPHENOL TO PRODUCE CATECHOL. THE CYTOCHROME BINDS
OTHER ORTHO-SUBSTITUTED PHENOLS, INCLUDING 2-ETHOXYPHENOL,
                                                                                                                                          PROSITE; PS00086; CYTOCHROME_P450; PARTIAL.

Oxidoreductase; Monooxygenase; Electron transport; Heme.

NON_TER 20 20

SEQUENCE 20 AA; 2428 MW; BCA81586D8DD1496 CRC64:
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PROSITE; PS01029; DEHYDROQUINASE_II; PARTIAL.
Quinate metabolism; Aromatic amino acid biosynthesis; Lyase.
NON_TER 20 20
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-1- SIMILARITY: BELONGS TO THE CYTOCHROME P450 FAMILY.
INTERPRO; IPR001128; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ++
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Bacteria; Firmicutes; Ac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
CYTOCHROME P450-RRI (EC 1.14.---) (P450-RRI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         \ctinomycetales;
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3 VEVL 6
7 LDEITMEEL 15
                                11 LEYVTLKKM 19
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SIMILARITY: BELONGS TO THE TYPE-II 3-DEHYDROQUINASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATALYTIC ACTIVITY: 3-DEHYDROQUINATE - 3-DEHYDROSHIKIMATE + H(2)O PATHWAY: THIRD STEP IN THE BIOSYNTHESIS OF CHORISMATE WITHIN THE BIOSYNTHESIS OF AROMATIC AMINO ACIDS (THE SHIKIMATE PATHWAY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            THE BIOSYNTHESIS OF AROMATIC AMINO ACIDS. HAS A TEMPERATURE OPTIMAL OF 76 DEGREES CELSIUS AND PH OPTIMAL OF 9.0. TYPE II
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                                                                                                                                                                                                                                                            2-METHYLPHENOL AND 2-CHLOROPHENOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Firmicutes; Actinobacteria; Actinobacteridae; etales; Corynebacterineae; Nocardiaceae; Rhodo
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                                                              Score 18; DB; Pred. NO. 4.7e
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                                                         DB 1; wc...
4.7e+03;
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Result
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Maximum DB
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   protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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PW0048	I53263	B49200	JP0061	JP0060	S24667	I77387	PH1599	H64710	S00189	S78343	F41606	B20596	E37520	I67553	PH1336
estrog	CRP-1	cystat	ribosc	ribosc	protei	AMP de	Ig H c	hypoth	. motili	hypoth	homeot	venom	glutat	топосу	Ig neavy
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## ALIGNMENTS

R;Awasthi, S.; Singhal, S.S.; Srivastava, S.K.; Awasthi, Y.C. Arch. Biochem. Biophys. 301, 143-150, 1993
A;Title: Purification and characterization of glutathione S-transferase of murine ova A;Reference number: 330369; MUID:93183007
A;Accession: S30373

A; Molecule type: protein A; Residues: 1-24 < AW1>

8.5

glutathione transferase (EC 2.5.1.18) mu (isoform pI 8.5) - mouse (fragment) C;Species: Mus musculus (house mouse) C;Date: 08-Dec-1993 #sequence\_revision 01-Dec-1995 #text\_change 03-May-1996 C;Accession: S30373; S30371

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A; Note: this form was identified by pI
A; Accession: S30371
A; Molecule type: protein
A; Residues: 1-24 <AW2>
A; Note: this form was identified by pI
C; Superfamily: glutathione transferase
C; Keywords: transferase
                                                                                                         A; Experimental so C; Keywords: seed
                                                                                                                                                                                                                                                        R;Codina, R.; Swanson, M.C.; Fernandez-Caldas, E.; Lockey, R.F.; Trudeau, W.L.; submitted to the Protein Sequence Database, October 1995
A;Description: Partial sequence of the Gly m 2 allergen from soybean hull.
                                                                                                                                                                                                                                                                                                                   hull allergen Gly m 2 - soybean (fragment)
C;Species: Glycine max (soybean)
C;Date: 27-Oct_1995 #sequence_revision 27-Oct-1995 #text_change 25-Oct-1996
C;Accession: A57106
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A; Accession: A57106
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Query Match 26.3%;
Best Local Similarity 50.0%;
Matches 4; Conservative
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5; Conservative
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Score 26; DB 2; Le
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1; Mismatches 3;
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Pred. No. 2.8e+02;
2; Mismatches 1;
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glutathione transferase (EC 2.5.1.18) MIII - mouse (fragment)
(;Species: Mus musculus (house mouse)
(;Date: 25-Oct.1987 #sequence_revision 25-Oct.1987 #text_change 18-Jun-1993
C;Accession: H24735
R;Mannervik, B; Alin, P; Guthenberg, C; Jensson, H; Tahir, M.K.; Warholm, Proc. Natl. Acad. Sci. U.S.A. 82, 7202-7206, 1985
A;Title: Identification of three classes of cytosolic glutathione transferase A; Reference number: A24735; MUID:86042634
A;Accession: H24735
A;Molecule type: protein
A;Residues: 1-23 <MAN>
C;Superfamily: glutathione transferase
                                                              prolamin - sorghum (fragment)
C:Species: Sorghum bicolor (sorghum)
A;Variety: P721 lines
C:Date: 21-Nov-1993 #sequence_revision
C:Accession: S09517
R:Bietz, J.A.
                                                                                                                                                                     RESULT
S09517
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A;Title: Cereal prolamin evolution and homology revealed by
A;Reference number: S09165; MUID:83153005
A;Accession: S09517
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Yue, X.; Favot, P.; Dunn, T.L.; Cassady, A.I.; Hume, D.A. Mol. Cell. Biol. 13, 3191-3201, 193
A;Title: Expression of mRNA encoding the macrophage colony-stimulating factor receptor A;Reference number: 157530; MUID:93268269
A;Accession: 157530
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A; Residues: 1-16 < RES>
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Pred. No. 8.8e+02;
1; Mismatches 3
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R;Ben-Arie, N.; Khen, M.; Lancet, D.
Blochem. J. 292, 379-384, 1993
A;Title: Glutathione S-transferases in rat ol
A;Reference number: S33237; MUID:93277499
A;Accession: S33237
A;Molecule type: protein
A;Residues: 1-24 CBEN>
A;Note: 18-IIe, 21-Glu, 23-Thr and 23-Glu wer
C;Superfamily: glutathione transferase
C;Keywords: transferase
glutathione transferase (EC 2.5.1.18) Mu 8.3 - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 03-Aug-1990 #sequence_revision 03-Aug-1990 #text_change 23-Jun-1993
                                                    RESULT
A35187
                                                                                                                                                                                                                                                                                              RiLevinson, D.A.; Campos-Torres, J.; Leder, P.
J. Exp. Med. 178, 317-329, 1993
A;Title: Molecular characterization of transgene-induced A;Reference number: PH1580; MUID:93301609
A;Accession: PH1615
A;Molecule type: DNA
A;Residues: 1-14 <LEV'>
A;Experimental source: Done marrow pre-B lymphocyte
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PH1615
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C;Species: Rattus norvegicus (Norway rat)
C;Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 07-May-1999
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A;Molecule type: protein
A;Residues: 1-21 <BIE>
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Section was

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hemocyanin subunit I - Atlantic horseshoe crab (fragment)
C;Species: Limulus polyphemus (Atlantic horseshoe crab)
C;Date: 05-Jun-1987 #sequence_revision 05-Jun-1987 #text_change 12-Apr-1995
C;Accession: A20554
R;Lamy, J.; Lamy, J.; Sizaret, P.Y.; Billiald, P.; Jolles, P.; Jolles, J.; F
Blochemistry 22, 5573-5583, 1983
A;Title: Quaternary structure of Limulus polyphemus hemocyanin.
A;Reference number: A90478
A;Accession: A20554
A;Accession: A20554
A;Holecule type: protein
A;Residues: 1-24 CLAM>
A;Residues: 1-24 CLAM>
C;Comment: Limulus polyphemus hemocyanin is an association of eight different C;Superfamily: hemocyanin
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J. Blol. Chem. 265, 7150-7157, 1990
A;Title: Purification and characterization of glutathione transferases with an A:Reference number: A35187; MUID:90237002
A;Accession: A35187
A;Status: preliminary
A;Molecule type: protein
A;
                                                                                                                                                                                                                                                                              Carboxylic acid reductase - Clostridium formicoaceticum
C;Species: Clostridium formicoaceticum
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 24-Ju
C;Accession: S18400
R;White, H.; Feicht, R.; Huber, C.; Lottspeich, F.; Simon, H.
Biol. Chem. Hoppe-Seyler 372, 999-1005, 1991
A;Title: Purification and some properties of the tungsten-containing
A;Reference number: S18400; MUID:92172285
A;Accession: S18400
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-25 <WHID
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Pred. No. 2e+0
2; Mismatches
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Pred. No. 2e+03;
3; Mismatches
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Pred. No. 2e+03;
3; Mismatches
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contraction-inhibiting peptide II - blue mussel (;Species: Mytilus edulis (blue mussel) (;C;Date: 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change 08 (;Accession: B27696 R;Hirata, T.; Kubota, I.; Iwasawa, N.; Takabatake, I.; Ikeda, T.; Blochem. Biophys. Res. Commun. 152, 1376-1382, 1988 A;Title: Structures and actions of Mytilus inhibitory peptides. A;Reference number: A90142; MUID:88240357 A;Accession: B27696
                                                                                                                                R;Dieualde-Noubhani, M.; Novikov, D.; Baumgart, E.; Vanhooren, J.C.T.; Fransen, M.; GEur. J. Biochem. 240, 660-666, 1996
A;Title: Further characterization of the peroxisomal 3-hydroxyacyl-CoA dehydrogenases e acids di- and tri-hydroxycoprostanic acids are metabolized by separate multifunctio A;Reference number: S74113; MUID:97008958
A;Accession: S74114
                                                                                                                                                                                                                                                                                                         3-hydroxyacyl-CoA dehydrogenase (EC 1.1.1.35) - rat (fragment)
c;Speciles: Rattus norvegicus (Norway rat)
C;Date: 13-7an-1995 #sequence_revision 17-Apr-1998 #text_change 17-Mar-1999
C;Accession: S74114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Gomez, F.J.; Gomez, A.M.; Deepe Jr., G.S.
Infect. Immun. 60, 2565-2571, 1992
A;Title: An 80-Kilodalton antigen from Histoplasma capsulatum that has homology to he A;Reference number: A43826; MUID:92307875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N;Alternate names: 80K heat shock protein 70 homolog C;Species: Ajellomyces capsulata, Histoplasma capsulatum C;Date: 22-Jan-1993 #sequence_revision 22-Jan-1993 #text_change 17-Mar-1999 C;Accession: A43826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
A43826
A; Experimental source: liver C; Superfamily: 3-hydroxyacyl-CoA dehydrogenase C; Superfamily: 3-hydroxyacyl-CoA dehydrogenase C; Keywords: fatty acid beta-oxidation; mitochondrion; NAD; oxidoreductase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Description: involved in protein folding and assembling/disassembling of protein co C;Superfamily: heat shock protein 70 C;Keywords: ATP; heat shock; molecular chaperone; stress-induced protein
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A;Residues: 1-18 <GOM>
A;Experimental source: extract of cell wall and
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A;Residues: 1-6 <HIR>
C;Keywords: amidated carboxyl end
F;6/Modified site: amidated carboxyl end (Val) #status experimental
                                                                                 A; Molecule type: protein A; Residues: 1-19 < DIE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  dnaK-type molecular chaperone - Ajellomyces capsulata (fragment)
N;Alternate names: 80K heat shock protein 70 homolog
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Pred. No. 2.2e+03;
2; Mismatches 3
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C;Species: Rattus norvegicus (Norway rat)
C;Date: 21-Sep-1993 #sequence_revision 18
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A;Title: Purification of glutaryl-CoA dehydrogenase from Pseudomor A;Reference number: A48367; MUID:93175988
A;Accession: A48367
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                                   temperature-labile cholesteryl ester hydrolase - rat (fragment)
                                                       A46644
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C; Keywords: oxidoreductase
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A;Experimental source: strain KB 740
A;Note: sequence extracted from NCBI backbone (NCBIP:125304)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     glutaryl-CoA dehydrogenase (EC 1.3.99.7) - Pseudomonas sp. (fragment)
C;Species: Pseudomonas sp.
C;Date: 01-Dec-1993 #sequence_revision 29-Sep-1999 #text_change 29-Sep-1999
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A; Residues: 1-19 <WIL>
A; Cross-references: EMBL: Z68117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;McMurray, A.
submitted to the EMBL Data Library, November 1995
A;Reference number: Z19534
A;Accession: T22228
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C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 18-Feb-2000
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Map position: X
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Pred. No. 2.4e+03;
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R;Carroll Jr., E.J.; Wei, S.H.; Nagel, G.M.
Arch. Biochem. Biophys. 284, 346-351, 1991
A;Title: Purification, physicochemical characterization, and immunohistochemical loca A;Reference number: S13899; MUID:91112831
A;Accession: S13899
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R;Wee, S.; Grogan, W.M.
J. Biol. Chem. 268, 8158-8163, 1993
A;Title: Testicular temperature-labile cholesteryl ester hydrolase. Relationship divalent cations.
                                                                                                                               A; Molecule type: protein A; Residues: 1-23 <OCH>C; Keywords: protein bios:
                                                                                                                                                                                                                                                                   C;Accession: JP0058 R;Ochi, K.
                                                                                                                                                                                                                                                                                                   ribosomal protein L30 - Bacillus cycloheptanicus (fragment) C;Species: Bacillus cycloheptanicus C;Date: 10-Mar-1994 #sequence_revision 28-Oct-1994 #text_ch
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A;Molecule type: protein
A;Residues: 1-22 <ARC>
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C;Species: Lepidobatrachus laevis
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 24-Jul-1997
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A;Residues: 1-20 <WEE>
A;Experimental source: testis
A;Note: sequence extracted from NCBI backbone (NCBIP:129155)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Reference number: A46644; MUID:93216794
A; Accession: A46644
                                                                                                                                                                                      submitted to JIPID, February 1994
A; Description: Phylogenetic diversity in the genus Bacillus and comparative ribosomal
A; Reference number: JP0042
A; Recession: JP0058
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Matches 4; Conserv
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Best Local :
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14 VTLKK 18
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                                     Score 22; DB 2;
Pred. No. 2.8e+03
1; Mismatches (
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Pred. No. 2.7e+03;
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Pred. No. 2.4e+03;
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6 ITLKK 10

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C;Species: Escherichia coli
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 31-Dec-1993
C;Accession: A60986
R.Broom, M.F.; Mellor, D.M.; Chadwick, V.S.
Experientia 45, 1097-1099, 1989
A;Title: Purification and amino acid sequencing of naturally occurring N-formyl-methiony A;Reference number: A60986; MUID:90092408
A;Accession: A60986
A;Accession: A60986
A;Molecule type: protein
A;Residues: 1-6 CBRO>
C;Comment: This hexapeptide was the longest of several N-formyl oligopeptides reported.
F;1/Modified site: N-formylmethionine #status experimental
                                                                                              R;Kirch, H.H.; Uhrig, H.; Lottspeich, F.; Salamini, F.; Thompson, R.D.
Theor. Appl. Genet. 78, 581-588, 1989
A;Title: Characterization of proteins associated with self-incompatibi
A;Reference number: PQ0749
A;Accession: PQ0750
A;Molecule type: protein
A;Molecule type: protein
A;Experimental source: style
C;Keywords: glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R:Miyazawa, K.; Kawaguchi, S.; Okamoto, A.; Kato, R.; Ogawa, T.; Kuramitsu, S.
J. Biochem. 115, 568-577, 1994
A;Title: Construction of aminotransferase chimeras and analysis of their substrate specia;Reference number: JX0315; MUID:94334304
A;Accession: JX0315
A;Molecule type: DNA
A;Residues: 1-12 <MIY>
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C:Species: synthetic
C:Date: 28-May-1999 #sequence_revision 28-May-1999 #text_change 28-May-1999
C:Accession: JX0315
                                                                                                                                                                                                                                                                                   self-incompatibility protein S3 - potato (fragment)
C;Species: Solanum tuberosum (potato)
C;Date: 19-May-1994 #sequence_revision 19-May-1994 #text_change 23-Mar-1995
C;Accession: PQ0750
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JX0315
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Best Local S
Matches 5
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Comment: The parental enzymes catalyze the reversible amino group transfer reaction be
Keywords: aminotransferase
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  h 21.2%;
Similarity 62.5%;
5; Conservative
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Score 21; DB 2; Pred. No. 2.7e+03; 1; Mismatches 2
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Pred. No. 2e+05;
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                  A; Reference number: A32902; A; Accession: A32902
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  A; Molecule
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type: protein

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GMP reductase / glucose-6-phosphate 1-dehydrogenase fusion protein - human (fragment) c;Species: Homo sapiens (man) C;Date: 10-Sep-1998 #sequence_revision 10-Sep-1998 #text_change 10-Sep-1998 C;Accession: A32902 R;Ranno, H.; Huang, I.Y.; Kan, Y.W.; Yoshida, A. Cell 58, 595-606, 1989 A;Title: Two structural genes on different chromosomes are required for encoding the A;Reference number: A32902; MUID:89336791
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A;Title: Purification of glutaryl-CoA dehydrogenase from Pseudomor A;Reference number: A48367; MUID:93175988
A;Accession: B48367
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Best Local Similarity of
Matches 5; Conservat
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Best Local Similarity
---has 5; Conserve
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A;Experimental source: cv. Russet Burbank
C;Reywords: proteinase inhibitor
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C;Species: Solanum tuberosum (potato)
C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 11-Jun-1999
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A;Experimental source: strain K 172
A;Note: sequence extracted from NCBI backbone (NCBIP:125302)
C;Keywords: oxidoreductase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Date: 29-Sep-1999 #sequence_revision 29-Sep-1999 #text_change 29-Sep-1999 C;Accession: B48367
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C:Species: Pseudomonas sp.
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A; Residues: 1-21 <LEE>
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Carboxylesterase (EC 3.1.1.1) RL1, microsomal - rat (fragment)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 30-Sep-1991 **sequence_revision 30-Sep-1991 **text_change 21-Aug-1998
C;Accession: S09021
R;Hosokawa, M.; Maki, T.; Satch, T.
Arch. Biochem. Biophys. 277, 219-227, 1990
A;Title: Characterization of molecular species of liver microsomal carboxylesterases of A;Reference number: S09021; MUID:90179180
A;Accession: S09021
A;Molecule type: protein
A;Residues: 1-22 GMOS>
C;Superfamily: cholinesterase; cholinesterase homology
C;Keywords: carboxylic ester hydrolase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R; Residues: 1-21 <KANN
R; Yoshida, A.; Kan, Y.W.
Cell 62, 11-12, 1990
A; Title: Origin of "fused" glucose-6-phosphate dehydrogenase.
A; Reference number: A55177
A; Contents: annotation
C; Comment: This peptide was sequenced from a fragment of a chimeric protein produced frow was later shown to be an artifact of purification and not a natural component of erythm C; Keywords: fusion protein F; 1-13/Region: GMP reductase
F; 14-21/Region: glucose-6-phosphate 1-dehydrogenase
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S09021
Search completed: February 5, 2001, 10:49:32 Job time: 745 sec
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Matches 5; Conserv
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Best Local Similarity 44.4%;
Matches 4; Conservative
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15 VLGKYVSL 22
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                                                                                                                                                                                                                                    Score 21; DB 2; Length 22; Pred. No. 3.9e+03;
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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.

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Result
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Maximum DB seq length: 25
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Gapop 10.0 , Gapext 0.5
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99
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9.913 Million cell updates/sec
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              65 kD Glutamic aci Human 65 kD glutami Glutamic acid deca GAD65 fragment, pe Peptide derived fr 65 kD Glutamic acid GAD65 residues 213 GAD65 residues 201 Peptide derived fr 65 kD Glutamic acid Glutamic acid Glutamic acid deca
                                                                                                                                                                                                                         Description
GAD65 fragment, pe
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## ALIGNMENTS

GAD; 65 kD; human; glutamic acid decarboxylase; autoreactive; diagnosis; insulin-dependent diabetes mellitus; IDDM; cell-mediated disease; predisposition; autoimmune; tumour; rheumatoid arthritis; W18847; W18847 standard; peptide; 20 Synthetic. multiple sclerosis. 65 kD Glutamic acid decarboxylase peptide fragment VI. 23-JAN-1997. DE19526561-A1. 05-JAN-1998 (first entry) A

Skin test for diagnosis of cell-mediated diseases, esp. diabetes involving intradermal admin. of auto:reactive substances WPI; 1997-088254/09. Donie F, Endl J, Pozzilli P, Stahl (BOEF ) BOEHRINGER MANNHEIM GMBH. 20-JUL-1995; 20-JUL-1995; 95DE-1026561. 95DE-1026561 Ganz M, Jung G, P; Kientsch-engel R;

Claim

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The present peptide is a framgent of the human 65 kD glutamine decarboxylase (GAD), which can be used to diagnose, or diagnose a predisposition to, a tumour or immunological disease, preferably are autoimmune disease, especially diabetes. It can also be used as a reagent to determine specific T cell subpopulations, in medicaments to treat or prevent immunological diseases, prefereably autoimmune diseases, especially diabetes, to produce antigens, especially immunogens or tolerogens and to isolate specific T cell subpopulations, which can be used to produce antigens or for reinjection, optionally after inactivation.
                                                                                                                                                                                                                                                                                              Albert W,
Stahl P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for diagnosis of insulin-dependent diabetes mellitus (IDDM). The diagnosis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected by administering an autoreactive substance intradermally and establishing the diagnosis on the basis of the occurrence or lack of a positive reaction at the site of administration. The method is used for diagnosis of autoimmune and tumour diseases, preferably T-cell-mediated diseases.
                                                                                                                                                                                 Claim
                                                                                                                                                                                                                 diabetes,
                                                                                                                                                                                                                              Glutamine decarboxylase peptide(s) -
                                                                                                                                                                                                                                                                WPI; 1997-078452/08
                                                                                                                                                                                                                                                                                                                                                                           14-JUL-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prevention; production; antigen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; glutamine decarboxylase; GAD; diagnosis; predisposition; tumour; immunological; disease; autoimmune; diabetes; reagent; determination; T cell; subpopulation; medicament; treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human 65 kD glutamine decarboxylase peptide.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       reinjection;
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                                                                                                                                                                               Page 12;
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Van Endert
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ilarity 100.0%;
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Pred. No. 1.8
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ches 0;
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Matches 20
                                                                                                                                          Q86481 and Q86482 encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 ederived. These fragments can be used to detect autoantibodies against GAD, e.g. to diagnose and treat GAD-related autoimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
                                                                                                                                                                                                                              New polypeptide fragments of glutamic acid decarboxylase - for diagnosis and treatment of auto:immune disease, esp. insulin dependent diabetes, also related nucleic acid, vectors, antibodies, hybridoma(s) etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                Clare-Salzler MJ,
                                                                                                                                                                                                                                                                                                                                      17-SEP-1993;
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                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                 Glutamic acid decarboxylase; GAD65; auotimmune insulin-dependant diabetes mellitus; stiff man
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                                                                                                                         20 AA;
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                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             decarboxylase
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide;
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                                                                                   79.8%;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GAD65) fragment.
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7.1e-08;
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disease.
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Y59574;

Y59574 standard; peptide;

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03-APR-2000 (first entry)

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21-SEP-1990;
18-JUN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This sequence represents a fragment of the glutamic acid decarboxylase 6: (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administering a GAD65 peptide to the patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amellorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAD65; glutamic acid decarboxylase 65; autoimmune disorder; IDDM; insulin dependent diabetes mellitus; Stiff man disease; diagnosis therapy.
DE4418091-A1
                                                                                                   diagnosis; autoimmune
                                                                                                                              diabetes; T-cell subpopulation;
                                                                                                                                                                                   Peptide derived
                                                                                                                                                                                                                                 05-MAR-1996 (first entry)
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                                                 Homo sapiens
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90US-0586536.
91US-0716909.
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                                                                                                                                                                             from human glutamic acid decarboxylase 10.
                                                                                                                                                                                                                                                                                                                                     peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     79.8%;
                                                                                                     disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Erlander MG;
                                                                                                                                                                                                                                                                                                                                          14
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Pred. No.
                                                                                                                                                                                                                                                                                                                                          A
                                                                                                                            detection; antigen production;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 21;
7.1e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
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Best Local Similarity
                                                                                                                                                                                                                         GAD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .24-MAY-1994;
         Donie F, E
Pozzilli P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          autoimmune diseases, including specific T-cell subpopulations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R76642-62 are derived from human glutamic acid decarboxylase and specifically react with T-cell sub-populations isolated from recently
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-FEB-1994;
20-JAN-1994;
                                                                                                                                         DE19526561-A1
                                                                                                                                                               Synthetic
                                                                                                                                                                                      predisposition; autoimmune; multiple sclerosis.
                                                                                                                                                                                                                                               65 kD Glutamic acid decarboxylase peptide fragment 10.
                                                                                                                                                                                                                                                                        05-JAN-1998
                                                                                                                                                                                                                                                                                              W18859;
                                                                                                                                                                                                                                                                                                                     W18859 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               e.g. by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             diagnosed Type-I diabetics. Pharmaceutical compsns. contg. these peptides and those shown in R77571-72, are useful for the diagnosis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Fig 2; 21pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Antigen-specific activated T-lymphocytes and their detection interaction with inventive peptide(s) of peptide-MHC complexes; useful in diagnosis of e.g. diabetes and auto:immune diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI, 1995-264505/35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Albert W, Dornmair K, Stahl P, Schendel D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-JUL-1995.
                                           (BOEF ) BOEHRINGER MANNHEIM GMBH
                                                                   20-JUL-1995;
                                                                                           20-JUL-1995;
                                                                                                                 23-JAN-1997.
                                                                                                                                                                                                             GAD; 65 kD; human; glutamic acid deca
insulin-dependent diabetes mellitus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ENDL/) ENDL J.
(BOEF ) BOEHRINGER MANNHEIM GMBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         disease or predispositions of immune system diseases, tumours, and stoimmune diseases, including diabetes. The peptides are able to detect secific T-cell subpopulations that are then used for antigen prodn.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               reinjection
                   Endl J,
                                                                                                                                                                                                                                                                                                                                                                                                                         66.7%;
nilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14 AA;
                                                                                                                                                                                                                       human; glutamic acid decarboxylase; autoreactive; diagnosis;
         Stahl
                                                                                                                                                                                                                                                                        (first
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94DE-4401629
                                                                   95DE-1026561
                                                                                         95DE-1026561
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         Ganz M,
P;
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                   Jung
                                                                                                                                                                                                 tumour;
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Pred. No.
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red. No. 1e-05;
Mismatches 0
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                                                                                                                                                                                                  rheumatoid arthritis;
                                                                                                                                                                                                             IDDM;
                     Kientsch-engel R;
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                                                                                                                                                                                                             cell-mediated disease;
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RESULT
W12408
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for diagnosis of insulin-dependent diabetes mellitus (IDDM). The diagnosis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected by administering an autoreactive substance intradermally and establishing the diagnosis on the basis of the occurrence or lack of a positive reaction at the site of administration. The method is used for diagnosis of autoimmune and tumour diseases, preferably T-cell-mediated diseases such as rheumatoid arthritis, multiple sclerosis and especially IDDM.
                                   New human glutamic acid decarboxylase peptide(s) - utreatment, diagnosis and determining predisposition for ameliorating auto-immune responses.
                                                                                                                                                                                                                                                                                                                    Location/Qualifiers Misc-difference 1..15
                                                                                                                                                                                                                                                                                                                                                                                                    65 kD glutamic acid decarboxylase; human; GAD65; neuron; central nervous system; type I dlabetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                             GAD65 residues 213-227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-OCT-1997 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W12408;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W12408 standard; peptide; 15 AA
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                                                                                       WPI; 1997-087322/08
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                                                                                                                                        (KENN-) KENNEDY INST RHEUMATOLOGY.
(NEUR-) NEUROCRINE BIOSCIENCES INC.
(SBAR-) ST BARTHOLOMEW'S HOSPITAL CENT CLINICAL.
                                                                                                                                                                                             23-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                         cell; therapy.
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mes 13; Conserv
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                                                                                                                                                                                                                                                                                                                                                                 sapiens.
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         Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fig 2; 12pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for diagnosis of cell-mediated diseases, esp. diabetes intradermal admin. of auto:reactive substances
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14 AA;
                                                                                                              Gaur A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                            95US-0494624
                                                                                                                                                                                                                       96WO-US10790
                                                                                                                                                                                                                                                                                                  /note= "optionally substituted, providing at least
    residues remain wild type"
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100.0%;
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Pred. No.
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le-05;
                                                                                                                 Londei M;
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                                                 on to d
                                                                                                                                                                                                                                                                                                                                                                                                     enzyme; pancreas;
autoimmune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                 diabetes and
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Claim 26;

28pp; English

W12403-W12413 represent fragments and analogues of the the 65 kD isoform of human glutamic acid decarboxylase (GAD65) (see W12402 for full length wild type protein). GAD is an enzyme expressed in the beta cells of the

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RESULT
W12407
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                                                                                                           cc w12403-w12413 represent fragments and analogues of the the 65 kD isoform co of human glutamic acid decarboxylase (GAD5) (see w12402 for full length cc wild type protein). GAD is an enzyme expressed in the beta cells of the pancreas, and in neurons of the central nervous system. There are two compared to the contral nervous system. There are two compared to the contral nervous system. There are two compared to the contral nervous system. There are two compared to the contral nervous system. There are two compared to the contral nervous system. There are two compared to the contral nervous system. There are two compared to the invention of compared to the invention. The compared to the contral nervous systems and the invention. The compared to the contral nervous systems are the invention of the native peptides with selective compared to the contral residues can induce unresponsiveness or change the compared for binding to MHC and do not cause proliferation of the corresponding native peptide-specific T cells.
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Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65 kD glutamic acid decarboxylase; human; GAD65; enzyme; pancreas; neuron; central nervous system; type I diabetes; autoimmune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAD65 residues 201-215.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-OCT-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W12407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W12407 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                             New human glutamic acid decarboxylase peptide(s) - used for treatment, diagnosis and determining predisposition to diabetes for ameliorating auto-immune responses.
                                                                                            WPI; 1997-087322/08
                                                                                                                                                                                                                         23-JUN-1995;
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                                                                                                                                                                                                                                                                                                                                                                                 Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                        (KENN-) KENNEDY INST RHEUMATOLOGY.
(NEUR-) NEUROCRINE BIOSCIENCES INC.
(SBAR-) ST BARTHOLOMEW'S HOSPITAL CENT CLINICAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              cell;
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25; Page -;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l Similarity
13; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                               therapy
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63.6%; Score 63; ilarity 100.0%; Pred. No. Conservative 0; Mismatri
                                                                                                                          Gaur A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
1..15
                                                                                                                                                                                                                                                                                                                                                    /note= "optionally substituted, providing at least
    residues remain wild type"
28pp; English.
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                                                                                                                            Leslie RDG,
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Best Local
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                                     R76642-62 are derived from human glutamic acid decarboxylase and specifically react with T-cell sub-populations isolated from recently diagnosed Type-I diabetics. Pharmaceutical compsns. conty. these peptides and those shown in R77571-72, are useful for the diagnosis of a disease or predispositions of immune system diseases, tumours, and autoimmune diseases, including diabetes. The peptides are able to detect specific T-cell subpopulations that are then used for antigen prodn.,
                                                                                                                                                                                           Antigen-specific activated T-lymphocytes and their detection interaction with inventive peptide(s) of peptide-MHC complexes; useful in diagnosis of e.g. diabetes and auto:immune diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pancreas, and in neurons of the central nervous system. There are two isoforms of GAD, a 67 kD isoform, and GADGS. Immunodominant regions of GADGS have been identified in Type I diabetic patients. These GADGS fragments, and analogues, are used in the methods of the invention. The methods are for detecting or treating diabetes or a predisposition to diabetes. The peptides can also be used for ameliorating an autoimmune response in a patient. Alteration of the native peptides with selective changes of crucial residues can induce unresponsiveness or change the responsiveness of antigen-specific autoreactive T cells. The peptide analogues compete for binding to MHC and do not cause proliferation of the corresponding native peptide-specific T cells.
                                                                                                                                                                   Claim 1; Fig 2; 21pp;
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20-JAN-1994;
                                                                                                                                                                                                                                                                                                          Albert W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DE4418091-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         diagnosis; autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-MAR-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        diabetes; T-cell subpopulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide derived
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10; Conser
                                                                                                                                                                                                                                                                                                                                       BOEHRINGER MANNHEIM GMBH.
                           reinjection
                                                                                                                                                                                                                                                                                            Schendel D;
                                                                                                                                                                                                                                                                                                         Dornmair K,
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llarity 100.0%;
Conservative
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94DE-4401629
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from human glutamic acid decarboxylase 11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peptide; 14 AA
                                                                                                                                                                    German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         disease.
                                                                                                                                                                                                                                                                                                         Endl J,
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Pred. No.
                                                                                                                                                                                                                                                                                                       Jung G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
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0.0084;
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RESULT R72275 ID R7

R72275 standard; Peptide;

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Query Match
Best Local S
Matches 10
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Best Local
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                                                                                    W18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for diagnosis of insulin-dependent diabetes mellitus (IDDM). The diagnosis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected by administering an autoreactive substance intradermally and establishing the diagnosis on the basis of the occurrence or lack of a positive reaction at the site of administration. The method is used for diagnosis of autoimmune and tumour diseases, preferably T-cell-mediated diseases such as rheumatoid arthritis, multiple sclerosis and especially IDDM.
                                                               Sequence
                                                                                                                                                                                                                            Claim 11; Fig 2; 12pp;
                                                                                                                                                                                                                                                                    Skin test
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAD; 65 kD; human; glutamic acid decarboxylase; autoreactive; diagnosis; insulin-dependent diabetes mellitus; IDDM; cell-mediated disease; predisposition; autoimmune; tumour; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                           WPI; 1997-088254/09
                                                                                                                                                                                                                                                                                                                   Donie F, Er
Pozzilli P,
                                                                                                                                                                                                                                                                                                                                                                                 20-JUL-1995;
                                                                                                                                                                                                                                                                                                                                                                                                        20-JUL-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                 23-JAN-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DE19526561-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           multiple sclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      65 kD Glutamic acid decarboxylase peptide fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W18860;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W18860 standard;
                                                                                                                                                                                                                                                       involving
                                                                                                                                                                                                                                                                                                                                                         (BOEF ) BOEHRINGER MANNHEIM GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11 LEYYTLKKMR 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10
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  10;
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               Similarity
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                                                                                                                                                                                                                                                                                                                   Endl J,
P, Stahl
                                                                                                                                                                                                                                                       for diagnosis of cell-mediated diseases, esp. diabetes intradermal admin. of auto:reactive substances
                                                                14 AA;
 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                  95DE-1026561
                                                                                                                                                                                                                                                                                                                                                                                                          95DE-1026561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                peptide;
                                                                                                                                                                                                                                                                                                                    Ganz M,
              49.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49.5%;
100.0%;
                                                                                                                                                                                                                               German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14
  0;
                                                                                                                                                                                                                                                                                                                                Jung G,
              Score 49;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 49;
Pred. No.
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                Kientsch-engel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 16;
0.012;
              0.08
              B 18;
  0
                        Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 14;
  Indels
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  0
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  Gaps
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Best Local S
Matches 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Glutamic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R72275;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q86481 and Q86482 encode R71733 and R79105, rat and human glutamic acid decarboxylase (GAD65) respectively, from which the GAD65 fragments described in R72261-R72298 were derived. These fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clare-Salzler MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-NOV-1995
                                                                                                                                                                                            GAD65 fragment, peptide #15.
                                                                                                                                                                                                                                                              Y59575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       can be used to detect autoantibodies against GAD, e.g. to diagnose and treat GAD-related autoimmune disorders, such as insulin dependant diabetes mellitus or stiff man disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New polypeptide fragments of glutamic acid decarboxylase - for diagnosis and treatment of auto:immune disease, esp. insulin dependent diabetes, also related nucleic acid, vectors,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W09507992-A
                              07-DEC-1999.
                                                              US5998366-A
                                                                                                                                             GAD65; glutamic acid decarboxylase 65; autoimmune disorder; IDDM; insulin dependent diabetes mellitus; Stiff man disease; diagnosis;
                                                                                                                                                                                                                            03-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-MAR-1995
09-APR-1997;
                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                             Y59575 standard; peptide; 20 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 11; Page 76; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
les 9; Conser
                                                                                                                                                                                                                                                                                                                             12
                                                                                                                                                                                                                                                                                                                                                                                                            12 EYVTLKKMR 20
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| eyvtlkkmr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hybridoma(s) etc
                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  decarboxylase (GAD65) fragment
                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93US-0123859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94WO-US09478
97US-0827618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Erlander MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         45.5%; Score 45;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kaufman DL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 16;
0.094;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tobin AJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 20;
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Best Local S
Matches 9
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21-SEP-1990;
18-JUN-1991;
                                                                                                                                                     This sequence represents a fragment of the glutamic acid decarboxylase 69 (GAD65) protein. The invention relates to a method of ameliorating GAD associated autoimmune disorders by administrating GAD associated patient. The method can be used for ameliorating GAD associated autoimmune disorders such as IDDM (insulin dependent diabetes mellitus) and Stiff man disease. GAD65 can also be useful for screening drugs that alter GAD function, for generating monoclonal antibodies and in immunoassays. GAD65 is an effective diagnostic tool for predicting IDDM and the diagnosis is quite easy. It is also possible to obtain much larger quantities of polypeptide via recombinant techniques than are
                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                      Example 11; Column 42; 61pp;
                                                                                                                                                                                                                                                                                                                                                                     disease
                                                                                                                                                                                                                                                                                                                                                                                  Ameliorating glutamic acid decarboxylase associated autoimmune disorders such as insulin dependent diabetes mellitus and Stiff man
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tobin AJ, Kaufman DL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (REGC ) UNIV CALIFORNIA.
                                  Similarity 100
9; Conservative
                                                                                                               20 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95US-0485725.
90US-0586536.
91US-0716909.
                                               45.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Erlander MG
                                    0,
                                                   Score 45;
Pred. No.
                                                                                                                                                                                                                                                                                                                                      English.
                                    Mismatches
                                                   DB 21;
0.094;
                                       0
                                                                 Length 20;
                                     Indels
                                    0;
                                     Gaps
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                12 EYVTLKKMR 20
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|eyvtlkkmr 9
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RESULT 13
R76659
ID R76659
PA
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                                                                                                                                                                                                                                                                                    R76659;
                                                                                                                                                                                                                                                                                                             R76659 standard; peptide;
                                       04-FEB-1994;
20-JAN-1994;
                                                                                                                                   DE4418091-A1
                                                                                                                                                                                     diagnosis;
                                                                                                                                                                                                                            Peptide derived from human glutamic acid decarboxylase 18.
                                                                                                                                                                                                                                                        05-MAR-1996 (first entry)
                                                                               24-MAY-1994;
                                                                                                        27-JUL-1995
                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                    diabetes; T-cell subpopulation;
BOEF ) BOEHRINGER MANNHEIM GMBH.
                                                                                                                                                                                      autoimmune disease.
                                       94DE-4403522
94DE-4401629
                                                                               94DE-4418091
                                                                                                                                                                                                                                                                                                             14 AA.
                                                                                                                                                                                                    detection; antigen production;
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Albert W, Stahl P,

Schendel D;

Endl J,

Jung

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Meinl

WPI; 1995-264505/35

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RESULT
W18867
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Best Local
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W18842-70 are peptide fragments of the 65 kD human glutamic acid decarboxylase (GAD). The fragments are autoreactive substances used for decarboxylase (GAD). The fragments are autoreactive substances used for diagnosis of insulin-dependent diabetes mellitus (IDDM). The diagnosis is determined by using a claimed method for diagnosis of cell-mediated diseases or a predisposition to cell-mediated diseases, which is effected by administering an autoreactive substance intradermally and establishing the diagnosis on the basis of the occurrence or lack of a positive reaction at the site of administration. The method is used for diagnosis of autoimmune and tumour diseases, preferably T-cell-mediated diseases
                                                                                                                                                                                                                         Donie F,
Pozzilli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a disease or predispositions of immune system diseases, tumours, and autoimmune diseases, including diabetes. The peptides are able to detect specific T-cell subpopulations that are then used for antigen prodn.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R76642-62 are derived from human glutamic acid decarboxylase and specifically react with T-cell sub-populations isolated from recently diagnosed Type-I diabetics. Pharmaceutical compsns. contg. these peptides and those shown in R77571-72, are useful for the diagnosis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Antigen-specific activated T-lymphocytes interaction with inventive peptide(s) of useful in diagnosis of e.g. diabetes and
                                                                                                                                 Claim 11; Fig
                                                                                                                                                                                               WPI; 1997-088254/09
                                                                                                                                                                                                                                                                                                                                                                  DE19526561-A1
                                                                                                                                                                                                                                                                                                                                                                                                                    multiple
                                                                                                                                                                                                                                                                                                                                                                                                                                 predisposition;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W18867 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1;
                                                                                                                                                                                                                                                              (BOEF ) BOEHRINGER MANNHEIM GMBH
                                                                                                                                                                                                                                                                                       20-JUL-1995;
                                                                                                                                                                                                                                                                                                               20-JUL-1995;
                                                                                                                                                                                                                                                                                                                                        23-JAN-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                              insulin-dependent
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match
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                                                                                                                                                                       test
                                                                                                                                                                                                                                                                                                                                                                                                                                                           65 kD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           reinjection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 7; Conserv
                                                                                                                                                                                                                        Endl J,
P, Stahl
                                                                                                                                                                                                                                                                                                                                                                                                                      sclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fig 2;
                                                                                                                                                         for diagnosis intradermal ad
                                                                                                                                                                                                                                                                                                                                                                                                                                   human; gruce;
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                                                                                                                               12pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peptide;
                                                                                                                                                                                                                        Ganz
P;
                                                                                                                                                                                                                                                                                                                                                                                                                                            glutamic acid decarboxylase; autoreactive; diagnosis;
diabetes mellitus; IDDM; cell-mediated disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   decarboxylase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36.4%;
                                                                                                                                                          admin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             German.
                                                                                                                                 German.
                                                                                                                                                         of cell-mediated diseases, esp. dmin. of auto:reactive substance
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14
                                                                                                                                                                                                                                    Jung
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                         auto:reactive substances
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                  rheumatoid
                                                                                                                                                                                                                                    Kientsch-engel
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2.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peptide-MHC complexes;
auto:immune diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and their detection
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   fragment
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                     diabetes
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Best Loc
Matches
The patent discloses six new cyclic peptides which have been isolated from the Western Pacific Ocean sponge Phakellia costata. They are: cyclo-(Pro-Thr-Pro-Phe-Ile-Phe-Ser) (designated phakellistatin 4), cyclo-(Pro-Phe-Sar-Ala-Met-Ala-Ile) (designated phakellistatin 5), cyclo-(Pro-Trp-Leu-Pro-Ile-Pro-Phe) (designated phakellistatin 6), cyclo-(Pro-Pro-Ile-Phe-Ala-Leu-Pro-Try-Ile) (designated phakellistatin 6), cyclo-(Pro-Pro-Ile-Phe-Ala-Leu-Pro-Pro-Tyr-Ile) (designated phakellistatin 8) and cyclo-(Pro-Pro-Ile-Phe-Val-Leu-Pro-Pro-Tyr-Ile) (designated phakellistatin 8) and cyclo-(Pro-Pro-Ile-Phe-Val-Leu-Pro-Pro-Tyr-Val) (designated phakellistatin 8) and cyclo-(Pro-Pro-Ile-Phe-Val-Leu-Pro-Pro-Tyr-Val) (designated phakellistatin 9). The cyclic peptides all demonstrate in vitro pass EDSO values of between 0.18 and 4.1 mcg/ml They also demonstrate in vitro yaulues of between 0.18 and 4.1 mcg/ml was also demonstrate in vitro yaulues of between 0.18 and 4.1 mcg/ml thuman cancer cell lines. They may thus be used in treatment of cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           such
                                                                                                                                                                                                                                                     WPI;
                                                                                                                                                                       Claim 7;
                                                                                                                                                                                                             New cyclic peptide(s)
and -9 - are isolated
                                                                                                                                                                                                                                                                              Pettit GR,
                                                                                                                                                                                                                                                                                                                                 14-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                         14-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                    08-JUL-1997.
                                                                                                                                                                                                                                                                                                                                                                                                            US5646246-A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cyclic; dec
anticancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                       (UYAR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Modified-site
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                                                                                                                                                                                                  treatment of cancer
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7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     decapeptide;
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/note=
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100.0%; Pr
0;
                                                                                                                                                                       29pp;
                                                                                                                                                                                                                                                                                                        STATE
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                                                                                                                                                                                                             designated phakellistatin from the sponge Phakellia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "the imino group of this residue forms a peptide bond with the carboxy group of Val(10), i.e. the residue is a component of a cyclic peptide and is not an N-terminal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                               "the carboxy group of this residue forms a peptide bond with the imino group of Pro(
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                                                                                                                                                                       English.
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Pred. No.
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the residue is a component of a cyclic
ide and is not a C-terminal"
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costata
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may
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RESULT 16
P30120
RESULT
P30121
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Best Local Similarity
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Best Local Similarity 66.7
Matches 6; Conservative
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14-APR-1982;
20-SEP-1984;
18-DEC-1984;
                                                                                                                                                         The peptides of the invention corresp. to a region on the antigenic picornavirus capsid protein. The capsid protein FMDV VPI or Polio virus VPI. When linked to carriers the peptides are immunogenic. Dose is 20 ug-2 mg peptide for innoculations.
                                                                                                                                                                                                                                   Antigenic peptide(s) corresp. to picornavirus capsid protein useful in prodn. of vaccines and in diagnostic tests
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Antigen; Picornavirus; capsid protein; antibody; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence is that of phakellistatin 9 which demonstrates in vitro ED50 value against P388 cells of 4.1\ mcg/ml.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence of peptide PP2c which corresp. to AAs
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                                                                                                                                                                                                                                                                    WPI; 1983-807942/44.
                                                                                                                                                                                                                                                                                                                                                                                                14-APR-1983;
                                                                                                                                                                                                                                                                                                                                                                                                                      27-OCT-1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein.
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(SCRI-) SCRIPPS CLINIC
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2 pifvlppyv 10
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                                                            1 TYEIAPVFVLLEYVTL 16
                                       tygtaparisvpyvgl 20
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                                                                                                                                      20 AA;
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                                                                                   Conservative
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82US-0368308.
84US-0653475.
84US-0682819.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptide;
                                                                                            31.3%;
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Pred. No.
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31;
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14;
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                                                                                                       Length 20;
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Best Local Similarity
Matches 7; Conserv
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14-APR-1982;
20-SEP-1984;
18-DEC-1984;
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                                                        Antigen; Picornavirus; capsid protein; antibody; detection; vaccine; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                     The peptides of the invention corresp. to a region on the antigenic picornavirus capsid protein. The capid protein FMDV VPI or Polio virus VPI. When linked to carriers the peptides are immunogenic. Dose is 20 ug-2 mg peptide for innoculations.
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WO8303547-A.
                                                                                                       Sequence
                                                                                                                                     03-APR-1992
                                                                                                                                                                   P30321;
                                                                                                                                                                                              P30321 standard; peptide; 20 AA.
                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
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                            Polio virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example; Page 53; 90pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1983-807942/44.
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(SCRI-) SCRIPPS CLINIC & RE
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                                                                                                      of polio virus VP1 capsid protein at position 182-201.
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                                                                                                                                                                                                                                                                                                                                                                                                             20 AA;
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                             type 3 Leon
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84US-0653475.
84US-0682819.
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RESULT 19
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14-APR-1982;
20-SEP-1984;
18-DEC-1984;
                                                                          US5646246-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                           The peptides of the invention corresp. to a region on Picornavirus capsid protein FMDV virus VP1. When linked to carriers the peptides are : Cose is 20 um-2mg peptide for inoculations.
                                                                                                                               Modified-site
                                                                                                                                                                                                                                                 Phakellistatin
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(SCRI-)
                                                           08-JUL-1997
                                                                                                                                                                                                                             cyclic; decapeptide;
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                                                                                                                                                                                                                                                                                                    W14897 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bittle JL,
      (UYAR-) UNIV
                        14-NOV-1994;
                                         14-NOV-1994;
                                                                                                                                                                            Modified-site
                                                                                                                                                                                                     Phakellia costata.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Fig 2; 90pp; English.
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       ARIZONA STATE
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82US-0368308.
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CLINIC &
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                                         94US-0338383
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                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                   peptide;
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                                                                                                                                                                                                                              phakellistatin; sponge; cytostatic;
                                                                                           "the carboxy group of this residue forms a peptide bond with the inino group of Pro(1), i.e. the residue is a component of a cyclic peptide and is not a C-terminal"
                                                                                                                                      "the imino group of this residue forms a peptide bond with the carboxy group of Ile(10), i.e. the residue is a component of a cyclic peptide and is not an N-terminal"
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VP1
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Matches S
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                                    Inhibiting particular protein kinases that have non-bulky residue in the ATP binding site using pyridinyl-imidazole derivative, e.g. for reducing deposition of extracellular matrix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MAP kinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein kinase; inhibitor; extracellular matrix deposition; ECM; tissue regeneration; tissue remodelling; wound healing; injury; fimunosuppression; diabetic nephropathy; and kidney damage; bone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New cyclic peptide(s) designated phakellistatin -4, -5, and -9 - are isolated from the sponge Phakellia costata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI;
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                                                                                                                              WPI; 2000-038954/03.
                                                                                                                                                                       Cohen P,
                                                                                                                                                                                                                                                               09-MAY-1998;
                                                                                                                                                                                                                                                                                                           04-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                    18-NOV-1999.
                                                                                                                                                                                                                                                                                                                                                                                                WO9958128-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human Src peptide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Y66492 standard;
                                                                                                                                                                                                                   (MEDI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |:||| |:
|pifvlppyi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in treatment of cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1997-362994/33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
5; Conserv
                                                                                                                                                                                                                   MEDICAL RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ED50 value against P388 cells of 2.9 mcg/ml
                                                                                                                                                                       Goedert M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     osteoporosis; arthritis; atherosclerosis; cytokine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Хu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                             98GB-0009869
                                                                                                                                                                                                                                                                                                           99WO-GB01385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peptide; 15
                                                                                                                                                                                                                   COUNCIL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30.3%;
55.6%;
                                                                                                                                                                       Eyers PA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 30; DB Pred. No. 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and may
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -7,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tumor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            growth;
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Example 1; Fig 1; 93pp; English

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RESULT
Y66517
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
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Inhibiting particular protein kinases that have non-bulky residue in the ATP binding site using pyridinyl-imidazole derivative, e.g. for reducing deposition of extracellular matrix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protein kinase; inhibitor; extracellular matrix deposition; ECM; cancer; tissue regeneration; tissue remodelling; wound healing; injury; fibrosis; immunosuppression; diabetic nephropathy; and kidney damage; bone growth; MAP kinase; osteoporosis; arthritis; atherosclerosis; cytokine; tumor.
                                                                                                                                                                                                                             Cohen P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human Src peptide fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-MAR-2000 (first entry)
                                                                                                                                                     WPI; 2000-038954/03.
                                                                                                                                                                                                                                                                                                      (MEDI-) MEDICAL RES COUNCIL.
                                                                                                                                                                                                                                                                                                                                                                               09-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-NOV-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Y66517 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    by Met or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21
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les 3; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
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                                                                                                                                                                                                                          Goedert M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        some other bulky residue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                           98GB-0009869
                                                                                                                                                                                                                                                                                                                                                                                                                                                    99WO-GB01385
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                                                                                                                                                                                                                             Eyers PA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 30; DB
Pred. No. 34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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Example 1; Fig 1; 93pp; English

DNA encoding the sequence was ligated to

the AOAH gene in

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Best Local Similarity
Matches 3; Conserv
                                            Claim 18; Page 67; 97pp; English
                                                                                                           Prodn: of acyl:oxy:acyl-hydrolase in eukaryotes - using DNA
constructed encoding whole protein or its sub-units, and used to
                                                                                                                                                                                                                                                                                                                                                                                      11-SEP-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAPK2a/p38 by treatment with a pyridinyl-imidazole, or related in The (I) is not SAPK2a/p38 or SAPK2b/p38beta2. The inhibitors are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to inhibiting a protein kinase (I) that has Thr (or a residue less bulky than Thr) at the position equivalent to Thr 106 in
                                                                                        treat gram negative sepsis
                                                                                                                                                                                   WPI; :1992-114352/14.
                                                                                                                                                                                                                               Ohara PJ,
                                                                                                                                                                                                                                                                      (ZYMO-) ZYMOGENETICS INC. (TEXA) UNIV OF TEXAS SYSTEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                  19-MAR-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W09204444-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Acyloxyacyl hydrolase; septicaemia; LPS; vaccine; human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Modified pre sequence for AOAH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-JUL-1992 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R22401 standard; Protein; 23 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       by Met or
                                                                                                                                                                                                                                                                                                                                          12-SEP-1990;
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                                                                                                                                                                                                                             Hagen FS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15 AA;
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                                                                                                                                                                                                                                                                                                                                          900S-0581342
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                                                                                                                                                                                                                               Grant FJ, Munford
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 30;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
34;
                                                                                                                                                                                                                               RS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 15;
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Best Local Similarity
Thes 5; Conserv
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                                                                                           Query Match
Best Local Similarity
Matches 6: Conserv
                                                                                                                                                                                                                                                                   N-terminal sequence shows very high levels of homology wiscorresponding region of Schistosoma and mammalian GSTs. Conservation of sequence resulted identities of 55-77% for Fh26b.

See also Q05732-Q05736, R06503 and R06505-R06506.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           expression vector. The vector was used to express the recombinant enzyme, which can be used prophylactically and therapeutically against Gram-negative septicamia in mammals. For treatment, 1 ug-10 mg AOAH is given per 70 kg body wt. The recombinant enzyme is produced in higher levels than found naturally in neutrophils and is more easily purified. See also R22395-400.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Vaccine against liver fluke infection in ruminants. esp. sheep - comprises glutathione-S-transferase extracted from adult fasciola
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Crameri SL,
Campbell NJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      glutathione-S-transferase
Fh26b;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-JAN-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R06504 standard; protein; 25
                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                 Fh26b is a GST isolated from the liver fluke F.hepatica.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Fig 19; 44pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (DARA-) DARATECH PTY LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-JAN-1990;
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10 vaplflll 17
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                                               6 PVFVLLEYV 14
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Thompson C,
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                                                                                                                     30.3%;
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, Sexton
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                                                                                              Score 30; DB
Pred. No. 62;
2; Mismatches
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Pred. No.
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Conservative

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Gaps

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ID 4490

XX Y66490

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Query Match
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Matches 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Y66490 standard;
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   Score 29; DB
Pred. No. 51;
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RESULT 25 Y66491

Y66491 standard; peptide; 15 AA

Y66491

Human Lck peptide fragment. 07-MAR-2000 (first entry)

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                                                                                                                                                                         The invention relates to inhibiting a protein kinase (I) that has Thr (or creative less bulky than Thr) at the position equivalent to Thr 106 in CC SAPKAzpj88 by treatment with a pyridinyl-imidazole, or related inhibitor. CC The (I) is not SAPKZapj88 or SAPKZbpj88betaz. The inhibitors are used correctly is not SAPKZapj88 or SAPKZbpj88betaz. The inhibitors are used correctly of wounds or injurles, also to reduce scar tissue formation, to healing of wounds or injurles, also to reduce scar tissue formation concerns the concerns and correctly of the concerns and correctly of the concerns and correctly of developing a brain injury; (ii) to treat patients with (or at risk of CC developing) end-stage organ failure, pathological ECM accumulation, concerns and concerns a
                                               Query Match
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Matches 3
                                                                                                                                                                      Sequence
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                                                  Local Similarity 37.1es 3; Conservative
     6 PVFVLLEY 13
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                                                                                                                                                                                                                      some other bulky residue.
                                                                                                                                                                      15 AA;
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                                               Score 29; DB:
Pred. No. 51;
4; Mismatches
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Search completed: February 5, 2001, 10:47:34 Job time: 628 sec

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       protein search, using sw model
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1: sp_archea:*
2: sp_bacteria
3: sp_fungi:*
4: sp_human:*
5: sp_inverteb:
6: sp_mammal:*
7: sp_mhc:*
8: sp_organe1:
9: sp_plane:*
10: sp_plane:*
11: sp_rodent:
12: sp_vertebr:
13: sp_vertebr:
14: sp_unclass:
     BLOSUM62
Gapop 10.0 , Gapext 0.5
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103
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: sp_plant:*
: sp_rodent:*
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: sp_unclassified:*
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Q9JG25
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24.999 Million cell updates/sec
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Q1-OCT-2000 (TIEMBLrel. 15, L
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BH0838 PROTEIN.
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STRAIN-C-125 / JCM 9153;
ST
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baci		Q9urc2 phanerochae	Q9urc3 phanerochae	4 solanum tu	Q9zyb7 spinaria sp	_	3 microp	) pyur	Q9uc21 homo sapien	str	. Q73605 human immun	Q52112 acinetobact	Ф	9	Q32966 pinus thunb	Q9x6q7 actinobacil	P92627 dinodon sem	Q95947 saccharomyc	Q9uwm8 halobacter1		P93516 arabidopsis	Q9p8s7 saccharomyc	Q9qge6 human immun	Q9qge8 human immun	Q9qgf0 human 1mmun

## ALIGNMENTS

Created)
Last sequence update)
Last annotation update)

PRT;

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DT 01-MAY-2000 (TrEMBLrel. 13, Created) DT 01-MAY-2000 (TrEMBLrel. 13, Last sequence update) DT 01-JUN-2000 (TrEMBLrel. 14, Last annotation update) DE HEMOGLOBIN (FRAGMENT). OS Lumbricus terrestris (Common earthworm). OC Eukaryota; Metazoa; Annelida; Clitellata; Oligochaeta; Haplotaxida; OC Lumbricina; Lumbricidae; Lumbricus.	RESULT 2 Q9TWT4 PRELIMINARY; PRT; 15 AA.	Qy 5 VISNPAATHQ 14  ::   :: Db 5 VLANPAVIYE 14	Query Match 26.2%; Score 27; DB 2; Length 14; Best Local Similarity 40.0%; Pred. No. 3.9e+02; Matches 4; Conservative 4; Mismatches 2; Indels 0;
x1da;			0; Gaps
			0;

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RESULT
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01-JUN-1998 (TrEMBLrel.
01-MAY-2000 (TrEMBLrel.
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                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-98161817; PubMed-9494106;
Murakami Y., Seya T., Kurita M., Fukui A.,
"Molecular cloning of membrane cofactor pro-
cell, an Epstein-Barr virus-transformed mar
is susceptible to infection by the CAM, but
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01-AUG-1998 (TrEMBLrel. 07, Last sequence update)
01-NOV-1998 (TrEMBLrel. 08, Last annotation update)
MEMBRANE COFACTOR PROTEIN CD46 (FRAGMENT).
Saguinus cedipus (Cotton-top tamarin).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Platyrrhini; Callitrichidae; Saguin
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01-AUG-1998 (TrEMBLrel.
01-AUG-1998 (TrEMBLrel.
01-NOV-1998 (TrEMBLrel.
SEQUENCE FROM N.A. MEDLINE-97224585;
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Biochem. J. 330:1351-1359(1998).
                       NCBI_TaxID=35580; [1]
                                              Eukaryota; Metazoa; Cl
Mammalia; Metatheria;
                                                                                              GLUCOSE-6-PHOSPHATE
                                                                     Macropus robustus robustus
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 PubMed-9060417
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                                             Chordata; Crania; a; Diprotodontia;
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NDROGENASE (FRAGMENT).
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                                              Craniata; Vertebrata; Euteleostomi;
dontia; Macropodidae; Macropus.
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01-NOV-1996 (TrEMBLrel. 0
01-NOV-1998 (TrEMBLrel. 0
E6 PROTEIN (FRACKENT).
SEQUENCE FROM N.A. MEDLINE-88089511; P. Krubke J., Kraus J. Pfister H.;
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Q9JIC5;
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                                                                                                                                                                    Human papillomavirus type i
Viruses; dsDNA viruses, no
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalla; Eutherla; Rodentia;
NCBI_TaxID=10090;
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EMBL: U53775; AAC48790.1; -.
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STRAIN-C57BL/6J;
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512; AAF81200.1;
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                          PubMed=2826651;
J., Delius H., Chow
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by polymerase chain reaction.";
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Sciurognathi; Muridae;
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7.7e+02;
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NOV-1996 (TrEMBLrel. 01, Last annotation update)
NEGATIVELY LICHT-REGULATED PROTEIN (LG106) (FRAGMENT).
Lemna gibba (Swollen duckweed).
Lemna gibba (Swollen duckweed).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Magnoliophyta; Lillopsida; Araceae; Lemna.
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01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NOV-1998 (TrEMBLrel. 08, Last annotation updat
30 KDA ANTIFUNGAL PROTEIN (FRAGMENT).
SEQUENCE FROM N.A.
Okubara P.A., Flores S., Tobin E.M.;
Plant Mol. Biol. 11:673-681(1988).
EMBL; M35866; AAA33395.1; -.
NON_TER 1
                                                                                                                                                                                                                                                                                                                                                                            "Isolation and characterization of a 30 kDa protein activity from leaves of Engelmannia pinnatifida."; Biochem. J. 316:723-727(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids II; Asterales; Asteraceae; Asteroideae; Heliantheae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Genetic relationship among human benign and malignant tumours of pa verruciformis.";
J. Gen. Virol. 68:3091-3103(1987).
EMBL; D00204; BAA00143.1;
NON_TER
24
                                                                                                                                                              Q40183;
                                                                                                                                                                         Q40183
                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-96265034; PubMed-8670144; Huynh Q.K., Borgmeyer J.R., Smith
                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE-LEAF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Engelmannia.
NCBI_TaxID=53580;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Engelmannia pinnatifida.
                                                                                                                                                                                                                                                                         Local Similarity 40.
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nes 4; Conserv
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8 AA;
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2086
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1.1e+03;
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Best Local S
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Best Local S
Matches 4
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Q62527;
Q1-JUN-1998
Q1-JUN-1998
Q1-NOV-1999
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Q40181;
01-NOV-1996
01-NOV-1996
01-NOV-1996
SHORTEST ORF
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NON_TER
SEQUENCE
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Plant Mol.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lemna gibba (Swollen duckweed).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta;
Magnoliophyta; Liliopsida; Araceae; Lemna.
      Nadeau J.H.;

"Genetic mapping of 40 cDNA clones on Mamm. Genome 5:349-355(1994).

-i- FUNCTION: THYROID HORMONE-BINDING THYROXINE FROM THE BLOODSTREAM TO

-i- SUBUNIT: HOMOTETRAMER.
                                                            Ko M.S., Wang X.,
                                                                      STRAIN-SPRET/EI;
MEDLINE-94319082;
                                                                                         SEQUENCE FROM N.A.
                                                                                                          Mammalia; Eutheria;
NCBI_TaxID=10096;
                                                                                                                   Mus spretus (Western wild mouse).
Eukaryota; Metazoa; Chordata; Cra
Mammalia; Eutheria; Rodentia; Sci
                                                                                                                                                      01-JUN-1998 (TrEMBLrel. 06, Created)
01-JUN-1998 (TrEMBLrel. 06, Last sequence up
01-NOV-1999 (TrEMBLrel. 12, Last annotation
TRANSTHYRETIN (PREALBUMIN) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                      Okubara
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U05689;
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4; Conservative
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4; Conserv
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5 (TremBirel. 01,
5 (TremBirel. 01,
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ol. 11:673-681(1988).
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AAB60461.1;
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                                                             PubMed=8043949;
Horton J.H., Hagen
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Pred. No.
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                                                                                                                   Craniata; Vertebrata;
Sciurognathi; Muridae;
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L.2e+03;
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Murinae; Mus
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Best Local S
Matches 4
                                          Whitton J.L., Rixon F.J., Easton A.J., Whitton J.L., Rixon F.J., Easton A.J., Whitton J.L., Rixon F.J., Easton A.J., Carling and Local Section 1. Action 1. 
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  NON_TER
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                                        Nucleic Acids Res. 11:6271-6
EMBL; X01624; CAA25766.1; -.
                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE-84015370; PubMed-6312416;
Whitton J.L., Rixon F.J., Easton A.J.,
                                                                                                                                                                                                                                   Herpes simplex virus (type Viruses; dsDNA viruses, no Alphaherpesvirinae; Simplex NCBI_TaxID=10310;
                                                                                                                                                                                                                                                                                                                01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1998 (TrEMBLrel. 08, (HSV) DNA FOR IE MRNA-2 5')
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Yoon K.S., Ishii M., Igarashi Y., Kodama T.;
Yoon K.S., Ishii M., Igarashi Y., Kodama T.;
"Purification and characterization of 2-oxoglutarate:ferredoxin
oxidoreductase from a thermophilic, obligately chemolithoautotrophic
bacterium, Hydrogenobacter thermophilus TK-6.";
J. Bacteriol. 178:3365-3368(1996)
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01-MAY-2000 (TIEMBLrel. 13, Last sequence update)
01-MAY-2000 (TIEMBLrel. 13, Last annotation update)
2-OXOCIUTARATE:FERREDOXIN OXIDOREDUCTASE BETA SUBUNIT
(EC 1.2.7.3) (FRAGMENT).
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Bacteria; Aquificales; Aquifi
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nes 4; Conser
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0 AA;
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  2180
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Simplexvirus.
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Last annotation update)
TERMINUS (FRAGMENT).
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1; Mismatches
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Pred. No.
  11C39C0D07A447A9
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3.7e+05;
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  CRC64;
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MEDLINE-84015370; PubMed-6312416;

Whitton J.L., Rixon F.J., Easton A.J., Cleme
Whitton J.L., Rixon F.J., Easton A.J., Cleme
"Immediate-early mRNA-2 of herpes simplex vi
unspliced: conserved sequences around the 5'
to transcription regulatory signals.";
Nucleic Acids Res. 11:6271-6287(1983).

EMBL; X01655; CAA25767.1; -.

EMBL; X01655; CAA25767.1; -.
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Q9JG25;
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STRAIN-PATIENT 2;
Okamoto H., Ukita M.,
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NCBI_TaxID=68887;
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TERMINUS (FRAGMENT).
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EMBL; AF174692; AAF00716.1;
DPFAV. TERMOUSZER. TREEDRO; IPRO00328:
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MEDLINE-99412391; PubMed-10482626;
MOITIS A., Marsden M., Halcrow K.,
Bell J.E., Simmonds P.;
Bell J.E., Simmonds P.;
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NON_TER
                                                                                                                                                                                                                                                                                                                                                               "Mosaic structure of the human immunodeficiency virus type 1 genome infecting lymphoid cells and the brain: evidence for frequent In vivo recombination events in the evolution of regional populations.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human immunodeficiency virus type 1.
Viruses; Retroid viruses; Retroviridae;
NCBI_TaxID=11676;
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Viruses: Retroid viruses; Retroviridae;
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AF174695; AAF00723.1;
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000 (TrEMBLrel. 13, Last sequence update)
000 (TrEMBLrel. 14, Last annotation update)
GLYCOPROTEIN (FRAGMENT).
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000 (TIEMBLrel. 13, Last sequence update)
000 (TIEMBLrel. 14, Last annotation updat
GLYCOPROTEIN (FRAGMENT).
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Q9QGG0;
01-MAY-2000
01-MAY-2000
                  infecting lymphoid cells and the brain recombination events in the evolution J. virol. 73:8720-8731(1999).
EMBL; AF174698; AAF00729.1; -.
INTERPRO; IPRO00328; -.
PFAM; PF00517; GP41; 1.
                                                                                                                                                              Human immunodeficiency virus type 1. Viruses; Retrold viruses; Retroviridae; NCBI_TaxID=11676;
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PFAM; PFO
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EMBL; AF174696; AAF00725.1; -.
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NON_TER 1
SEQUENCE 22 AA;
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Bell J.E., Simmonds P.;
"Mosaic structure of the human immunodeficiency virus type 1 genome
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Bell J.E., Simmonds P.;
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Viruses; Retroid viruses; Retroviridae;
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                                                                                                          MEDLINE-99412391; PubMed=10482626; Morris A., Marsden M., Halcrow K.,
                                                                                                                                            SEQUENCE FROM N.A.
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Morris A., Marsden M., Halcrow K.,
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6; Conservative
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GLYCOPROTEIN (FRAGMENT).
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                                                              the human immunodeficiency virus type 1 genome ells and the brain: evidence for frequent In virin the evolution of regional populations.";
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01-MAY-2000
                      "Mosaic structure of the human immunodeficiency virus type 1 genome infecting lymphoid cells and the brain: evidence for frequent In virecombination events in the evolution of regional populations.";
                                                                                     MEDLINE-99412391; PubMed=10482626; Morris A., Marsden M., Halcrow K., Bell J.E., Simmonds P.;
                                                                                                                                                                                                                                        Human immunodeficiency virus type 1. Viruses; Retroid viruses; Retroviridae;
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UN-2000 (TrEMBLrel. 14, Last annotation update)
ENVELOPE GLYCOPROTEIN (FRAGMENT).
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NON_TER 1
SEQUENCE 22 AA;
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NCBI_TaxID-11676;
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INTERPRO; IPR000328; -.
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es; Retroviridae;
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O90GE8;
O1-MAY-2000 (TrEMBLrel. 13, Createu, 101-MAY-2000 (TrEMBLrel. 13, Last seq 01-JUN-2000 (TREMBLrel. 14, Last ann PNVELOPE GLYCOPROTEIN (FRAGMENT).
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Best Local S
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Matches
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Q9QGE6;
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Q1-MAY-2000 (TrEMBLrel. 13, Last &
Q1-JUN-2000 (TrEMBLrel. 14, Last &
ENVELOPE GLYCOPROTEIN (FRAGMENT).
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EMBL; AF174702; AAF00737.1; -.
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  MEDLINE=99412391; PubMed=10482626; Morris A., Marsden M., Halcrow K.,
                                               STRAIN-CP-2
                                                                                                        Viruses; Retroid
NCBI_TaxID=11676;
                                                                                                                                Human immunodeficiency virus type 1.
Viruses; Retroid viruses; Retroviridae;
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Pred. No. 2.1e+03;
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P93516;

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P93516;

P01-MAY-1997 (TrEMBLrel. 03, Created)

P01-MAY-1997 (TrEMBLrel. 03, Last sequence update)

P101-CCT-2000 (TrEMBLrel. 15, Last annotation update)

COPPER AMINE OXIDASE (FRAGMENT).

Arabidopsis thaliana (Mouse-ear cress).

EUKaryota; Viridiplantae; Embryophyta; Tracheophyta; Sekaryota; Viridiplantae; Embryophyta; Tracheophyta; Seassicales; Brassicaceae; Arabidopsis.

NCBI_TaxID-3702;
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Matches 5; Conser
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EMBL, AF218307; AAF43643.1; ---
EMBL, AF43645.1; ---
EMBL, AF4365.1; ---
EMBL, A
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01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
ALCOHOL DEHYDROGENASE ISOZYME 2 (FRAGMENT).
Saccharomyces douglasii (Yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycetes; Saccharomycetales;
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Mosaic structure of the human immunodeficiency virus type 1 genome infecting lymphoid cells and the brain: evidence for frequent In vivo recombination events in the evolution of regional populations.";

J. Virol. 73:8720-8731(1999).

EMBL; AF174703 AAF00739.1;

INTERPRO; IPR000328;

Moller S.G., Mcpherson M.J.;
Biochem. Soc. Trans. 23:0-0(1995).
EMBL, S82298, AAB37691.1; -
INTERPRO; IPRO00269; -
                                                                                                                                                                                                SEQUENCE FROM N.A.
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Pred. No. 2.4e+03;
1; Mismatches 4
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1; Mismatches 9
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Q9S8W9;
Q1-MAY-2000 (TrembLrel. 13, Created)
Q1-MAY-2000 (TrembLrel. 14, Last sequence update)
Q1-JUN-2000 (TrembLrel. 14, Last annotation update)
SELF-INCOMPATIBILITY S3 GLYCOPROTEIN (FRAGMENT).
NICOTIANA alata (Winged tobacco) (Persian tobacco).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Magnollophyta; eudicotyledons; core eudicots; Asteridae; euasterids
Solanales; Solanaceae; Nicotiana.
                                                                                                                                                                                                                                                                                                                                MEDILINE-92404717; PubMed-2535548; Jahnen W., Batterham M.P., Clarke A.E., Moritz R.L., Simpson R.J.; Tahnen W., Batterham M.P., Clarke A.E., Moritz R.L., Simpson R.J.; "Identification, 1solation, and M-terminal sequencing of style glycoproteins associated with self-incompatibility in Nicotiana alata."; Plant Cell 1:493-499(1989).

SEQUENCE 15 AA; 1814 MW; D9F5D7B05B215937 CRC64;
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Gapop 10.0 , Gapext 0.5
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                        UN01_PINPS
HEMU_LINRE
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BTX_ATRBI
AROE_BUCAI
ECDL_LYMDI
IF2G_PIG
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IF2G_PIG
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      4 leucophaea
9 manduca sex
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7 cucumis sat
1 thunnus obe
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9 styela clav
1 tetrahymena
5 treponema h
5 conus penna
9 euphorbia m
1 bison bonas
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4 solanum tub
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24 AA. odate) update) uliformea; Lingulata;	Score 25; DB 1; Length 15 Pred. No. 2.1e+02; 4; Mismatches 2; Indels	C., Bahrman N., edle and xylem eTERMINED PI OI	gerio J.M.; in maritime pine. ors assayed on dipl	late) pdate) (S1247/S1248) Tracheophyta;	NTS	
	15; -	, Kremer , maritime	21.	(N150/N151) Spermatophyt		P46693 P37863 P371863 P49289 P27532 P27532 P27532 P813183 P813183 P801363 P80376 P80376
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Linguloidea; Lingulidae; Lingula.

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PKI2_S
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SEQUENCE
  PQQA_PSEFL
P55171;
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01-MAR-1992 (Rel. 21, Last sequence update)
01-MAR-1992 (Rel. 21, Last annotation update)
KUNITZ-TYPE INHIBITOR-2 (PKI-2) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Two distinct subunits of hemerythrin from the brachlopod Lingula reevil: an apparent requirement for cooperativity in 02 binding."; Biochemistry 30:9121-9124(1991).
-i-FUNCTION: HEMERYTHRIN IS A RESPIRATORY PROTEIN IN BLOOD CELLS CERTAIN MARINE WORMS. THE OXYGEN-BINDING SITE IN EACH CHAIN
                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                Serine protease inhibitor.
                                                                                                                                                                                                                                                                                                                                                                                                                  INTERPRO; IPRO02160; -.
PFAM; PF00197; Kunitz_legume;
PROSITE; PS00283; SOYBEAN_KUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Two Kunitz-type proteinase inhibitors from potato tubers."; plant Physiol. 97:15-18(1991).
-i- FUNCTION: POTENT INHIBITOR OF SUBTILISIN. MODERATE INHIBITOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN-CV. RUSSET BURBANK; Walsh T.A., Twitchell W.P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Solanum tuberosum (Potato).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spe
Magnoliophyta; eudicotyledons; core eudicots; Asteridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oxygen transport;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Solanales; Solanaceae; Solanum.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OF TRYPSIN AND CHYMOTRYPSIN.
TISSUE SPECIFICITY: CORTEX OF POTATO TUBER.
SIMILARITY: TO SOYBEAN TRYPSIN INHIBITOR (K
PROTEASE INHIBITOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONTAINS TWO IRON ATOMS.
SUBUNIT: OCTAMER COMPOSED OF TWO TYPES
SIMILARITY: BELONGS TO THE HEMERYTHRIN
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                       STANDARD;
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Metal-binding; Iron.
24 IRON 1 (BY
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01-0CT-1996
01-0CT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Schnider U., Reel C., Defago G., Haas D.;
"Tn5-directed cloning of pqq genes from Pseudomonas fluorescens CHA(
mutational inactivation of the genes results in overproduction of the
antiblotic pyoluteorin.";
Appl. Environ. Microbiol. 61:3856-3864(1995).
-I- FUNCTION. REQUIRED FOR COENZYME PYEROLO-QUINOLINE-QUINONE (PQQ)
BIOSYNTHESIS. THIS PROTEIN COULD FUNCTION AS A TEMPLATE FOR PQQ
SYNTHESIS AND PROVIDE THE GLUTAMATE AND TYROSINE RESIDUES WHICH
ARE NECESSARY FOR THE SYNTHESIS.
-I- SIMILARITY: TO OTHER BACTERIAL PQQA.
                                                                                                                                                                SEQUENCE.
                                                                                                                                                                                                                                                                                                                    BUK_CLOPA P81337;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POQ.
SEQUENCE
                                   "Two-dimensional gel electrophoresis separation and N-terminal sequence analysis of proteins from Clostridium pasteurianum W5. Electrophoresis 19:802-806(1998).

Electrophoresis 19:802-806(1998).

FUNCTION: CATALYSES THE CONVERSION OF BUTYRYL-COA THROUGH B PHOSPHATE TO BUTYRATE (BY SIMILARITY).

FORTHWAY: INVOLVED IN THE ACLOGGENIC PHASE OF FERMENTATION.
                                                                                                                                                                                                                                                             15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last anno
15-JUL-1998 (Rel. 36, Last anno
BUTYRATE KINASE (EC 2.7.2.7) (/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                     Clostridium
Bacteria; Fi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entities requires a license agreement (See http://www.isbor send an email to license@isb-sib.ch).
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                                                                                                                                                  MEDLINE=98291870;
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                         I- SIMILARITY: BELONGS TO THE ACETOKINASE FAMILY
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X87299; CAA60731.1;
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                                                                                                                                     Skjeldal L.;
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34, Last sequence update)
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                                                                                                                                                   PubMed=9629918;
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O; Mismatches
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from Pseudomonas fluorescens CHAO:
from esults in overproduction of the
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38) (FRAGMENT).
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ACETATE\_KINASE\_1;

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PROSITE;

PS01076; ACETATE\_KINASE\_2;

PARTIAL

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RESULT
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Matches 3
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01-OCT-1996 (Rel
15-JUL-1999 (Rel
UNKNOWN PROTEIN)
                                                                                                               SRID_ATREN STANDARD;
p13211;
p13211;
01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last sequence update)
01-FB-1994 (Rel. 28; Last annotation update)
SARAFFOTOXIN-D (S6D) (SRTX-D).
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NON_TER
SEQUENCE 9
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NON_TER
SEQUENCE
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Pernollet J.-C., Zivy M., d
"The maize two dimensional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zea mays (Maize).
Eukaryota; Viridiplantae; !
Magnoliophyta; Liliopsida;
         Bdolah A., Wollberg Z., Flemin "SRTX-d, a new native peptide FEBS Lett. 256:1-3(1989).
                                                    SEQUENCE.
TISSUE-VENOM;
                                                                                Atractaspis engaddénsis (Israeli burrowing asp).
Eukaryota; Metazoa; Chordata; Cranlata; Vertebrata;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Col
Atractaspididae; Atractaspis.
                                                                                                                                                                                        ATREN
                                                                                                                                                                                                                                                                                                                                                       PROTEIN IS: 4.9, ITS MW IS: 3 MAIZE-2DPAGE; P80635; COLEOPTILE. MAIZEDB; 123960; -.
                                         MEDLINE-90033283;
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[1]
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VASOCONSTRICTOR ACTIVITY.
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193:997-1005(1996).

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ON THE 2D-GEL THE DETERMINED
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., de Vienne D.;
nal gel protein databas
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                    endothelin/sarafotoxin family.";
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P40732;
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or send an email to license@isb-sib.ch).
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MEDLINE-90094246; PubMed-2403545;

Tran P.V., Bannor T.A., Doktor S.Z., Nichols B.P.;

"Chromosomal organization and expression of Escherichia coli pa
"Chromosomal organization and expression of Escherichia coli pa
"Bacteriol. 172:397-410(1990).

"Bacteriol. 172:397-410(1990).

"CATALYZIC ACTIVITY: NZ-ACETYL-L-ORNITHINE + 2-OXOGLUTARATE
N-ACETYL-L-GLUTAMATE 5-SEMIALDEHYDE + L-GLUTAMATE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIR; S06145; S06145.
HSSP; P13208; 1SRB.
INTERPRO; IPR001928;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PFAM; PF00322; endothelin; 1. PRINTS; PR00365; ENDOTHELIN. PROSITE; PS00270; ENDOTHELIN;
                                                                                                                                             EMBL; M32354; AAA24265.1;
EMBL; M32355; AAA27178.1;
STYGENE; SG10488; ARGD.
                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict
                                                                                                                                                                                                                                                                                                                        -1- COFACTOR: PYRIDOXAL PHOSPHATE.
-1- PATHWAX: FOURTH STEP IN ARGININE BIOSYNTHESIS.
-1- MISCELLANEOUS: THE REACTION CATALYZED BY ACOAT IS HIGHLY
-1- REVERSIBLE. MOREOVER THIS ENZYME MAY TRANSAMINATE ORNITHINE.
-1- SIMILARITY: BELONGS TO CLASS-III OF PYRIDOXAL-PHOSPHATE-DEPENDENT
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-!- MISCELLANEOUS: LD(50) IS 0.35 MG/KG BY INTRAVENOUS
-!- SIMILARITY: BELONGS TO THE ENDOTHELIN/SARAFOTOXIN I
                                                                 Arginine biosynthesis.
NON_TER 17 17
SEQUENCE: 17 AA; 190
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(Rel. 31, Last annotation)
(Rel. 31, Last annotation)
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              21.4%;
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 Score 22; DB 1;
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1; Mismatches 10
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Pred. No.
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83A8A04D1D536AE2 CRC64;
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                                                                                                       phosphate;
                                                                                                                                                                                                                http://www.isb-sib
                                                                                                                                                                                                                              Usage
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                          Length 17;
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SEQUENCE:
SPECIES-C.E.NELSONI;
SPECIES-C.E. Doolittle R.F.;
Mross G.A., Doolittle R.F.;
Mross deducte studies on artiodacty fibrinopeptides.";
"Amino acid sequence studies on artiodacty fibrinopeptides.";
"Anch. Biochem. Biophys. 122:674-684(1967).

-i- FUNCTION: FIBRINOZEN HAS A DOUBLE FUNCTION: YIELDING MONOMERS."
-i- FUNCTION: FIBRINOZEN HAS A DOUBLE FUNCTION: YIELDING MONOMERS."
                                                                                                                                                           Ol-van-1000 (Older), and Cervus elaphus Cervus elaphus (Red deer), and Cervus elaphus Ebkaryota; Metazoa; Chordata; Craniata; Vertek Mammalia; Eutheria; Cetartiodactyla; Ruminanti Carvidae; Cervinae; Cervus.
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01-NOV-1988
30-MAY-2000
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01-JAN-1990 (Rel. 13,
01-JAN-1990 (Rel. 13,
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SEQUENCE
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                                                                                                                               Blomback
                                                                                                                                                    SEQUENCE.
                                                                                                                                                                                                                                                            P14446
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RL23_HALCU
P05975;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE;
                                                                                                       slomback B., Blomback M., Grondahl N.J.;
'Studies on fibrinopeptides from mammals.";
cta Chem. Scand. 19:1789-1791(1965).
                                                                                                                                                                                                                                                                                                                                                                                                                                                      NTERPRO; IPRO01014; -.
PROSITE; PS00050; RIBOSOMAL_L23;
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SIMILARITY: BELONGS TO THE L23
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(Rel.
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8.4e+02
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RESULT 12
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MEDIXINE-99013685; PubMed-9794786;

MEDIXINE-99013685; PubMed-9794786;

MEDIXINE-99013685; PubMed-9794786;

MEDIXINE-99013685; PubMed-9794786;

MEDIXINE-99013685; PubMed-9794786;

MEDIXINE-15013 Green Service Control of Lodopamine of Ladopamine of Ladopamin
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-!- MISCELLANEOUS: CONVERSION OF FIBRINGEN TO FIBRIN IS TRIGGERED THRONDIN, WHICH CLEAVES FIBRINGEPITIOES A AND B FROM ALPHA & BE CHAINS, AND THUS EXPOSES THE N-TERMINAL POLYMEBRIZATION SITES RESPONSIBLE FOR THE FORMATION OF THE SOFT CLOT.
HSSP; P02671; 1BBR.
Blood coagulation; Plasma.
                                                                                                     01-APR-1993
01-APR-1993
01-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-JUL-1999 (Rel. 38,
15-JUL-1999 (Rel. 38,
01-OCT-2000 (Rel. 40,
L-DOPACHROME-METHYL F
BIBROTOXIN (BTX).
Atractaspis bibroni (Southern bibron's) (Stiletto snake)
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eute
Lepidosauria; Squamata; Sclerogiossa; Serpentes; Colubro
Atractaspididae; Atractaspis.
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P80163;
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NON_TER
SEQUENCE
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PROSITE; F
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SEQUENCE
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Eukaryota; Metazoa; Nematoda; Enoplea; Trichocephi
Trichocephalina; Trichinelloidea; Trichinellidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P81529;
15-JUL-1999
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Pred. No. 8.
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8.9e+02;
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8.9e+02;
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of L-dopamine-methyl-ester
tory factor) from Trichinella
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Meyer D.J
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Best Local Similarity 75.0
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30-MAY-2000
30-MAY-2000
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SEQUENCE
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SEQUENCE.
TISSUE-VENOM;
MEDLINE-93106214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.

MEDLINE-95212914; PubMed-7535281;

ROUNDAKHSh D., Baumann P.;

"Characterization of a putative 235-55 rRNA operon of Buchnera aphidicola (endosymbiont of aphids) unlinked to the 165 rRNA-ea
                                                                                                                       entities or send a
                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outset the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for commodified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
01-CCT-2000 (Rel. 40, Last annotation update)
SHIKIMATE 5-DEHYDROGENASE (EC 1.1.1.25) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -1- FUNCTION: VASOCONSTRICTOR ACTIVITY. THESE TOXINS CAUSE CARDIAC ARREST PROBABLY AS A RESULT OF CORONARY VASOPLASM.
-1- SIMILARITY: BELONGS TO THE ENDOTHELIN/SARAPOTOXIN FAMILY.
PIR: S27039; S27039.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Becker A., Dowdle Schleuning W.-D.;
                                               Aromatic
                                                                          EMBL; U10496; AAA79125.1; ALT_FRAME
                                                                                                                                                                                                                                                                                                                                                                                                                             -!- PATHWAY: FOURTH STEP IN THE BIOSYNTHESIS OF CHORISMATE WITHIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gene 155:107-112(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        symbiotic bacterium)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Buchnera aphidicola (subsp. Acyrthosiphon pisum) (Acyrthosiphon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00365; ENDOTHELIN.
PROSITE; PS00270; ENDOTHELIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INTERPRO; IPRO01928; -. PFAM; PF00322; endothelin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Bibrotoxin, a novel member of the endothelin/sarafotoxin peptide family, from the venom of the burrowing asp Atractaspis bibroni."; FEBS Lett. 315:100-103(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- CATALYTIC ACTIVITY:
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                                                                                                                                                                                                                                                                                                                        BIOSYNTHESIS OF AROMATIC AMINO ACIDS (THE SHIKIMATE PATHWAY).
SIMILARITY: BELONGS TO THE SHIKIMATE DEHYDROGENASE FAMILY.
CAUTION: REF.1 SEQUENCE DIFFERS FROM THAT SHOWN DUE TO A
FRAMESHIFT IN POSITION 13.
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                                                                                                    requires a license agreement (See http://www.isb-sib.an email to license@isb-sib.ch).
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2590 MW; 23AE77462AB812E6 CRC64;
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BY SIMILARITY.
83A5DFB81D036AE2 CRC64;
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Pred. No. 9.9e+02.
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L_LYMDI
ECD1_LYMDI
P80936; P558
01-NOV-1997
              "Pig liver translational initiation factor eIF-2: N-terminal amino acid sequences of alpha and gamma subunits and the phosphorylation site structure.";
Agric. Biol. Chem. 52:1397-1408(1988).
-I- FUNCTION: EIF-2 FUNCTIONS IN THE EARLY STEPS OF PROTEIN SYNTHESIS BY FORMING A TERMARY COMPLEX WITH GTP AND INITIATOR TRNA. THIS COMPLEX BINDS TO A 40S RIBOSOMAL SUBUNIT, FOLLOWED BY MRNA BINDIN TO FORM A 43S PREINITIATION COMPLEX. JUNCTION OF THE 60S RIBOSOM SUBUNIT TO FORM THE 80S INITIATION COMPLEX IS PRECEDED BY HYDROLYSIS OF THE GTP BOUND TO EIF-2 AND RELEASE OF AN EIF-2-GDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IF2G_PIG STANDARD; PRT; 22 AA.
P20461;
01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
EUKARYOTIC TRANSLATION INITIATION FACTOR 2 GAMMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence 01-NOV-1997 (Rel. 35, Last annotatio)
TESTIS ECDYSIOTROPIN PEPTIDE 1 (TE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 brain extracts of the the gipsy moth, Lymantria dis
Arch. Insect Blochem. Physiol. 34:175-189(1997).
-1- FUNCTION: START OR BOOST ECDYSTEROID SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wagner R.M., Loeb M.J., Kochansky J.P.,
Bell R.A.;
                                                                                                                                                                                                                                                           Suzuki H., Mukouyama
                                                                                                                                                                                                                                                                                    SEQUENCE.
TISSUE=LIVER;
                                                                                                                                                                                                                                                                                                                                                        Sus scrofa (Pig).
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAMMA) (FRAGMENT).
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Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insec
Pterygota; Neoptera; Endopterygota; Lepidoptera; Glossata;
Noctuoidea; Lymantriidae; Lymantria.
                                                                                                                                                                                                                                                                                                                                                                                                                             EIF2S3 OR EIF2G
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1.5e+03;
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Best Local S
Matches 3
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Best Local S
Matches 3
                                           LPCP_YEAST
P08521;
01-AUG-1988
01-AUG-1988
01-NOV-1997
CPA1 LEADER
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P19863;
01-FEB-1991
                                                                                                                                                                                                                                                        UNSURE
SEQUENCE
                                                                                                                                                                                                                                                                                                                     TISSUE-INTESTINE;

MEDLINE-83195948; PubMed-6844663;

MEDLINE-83195948; PubMed-6844663;

Poitras P., Reeve J.R. Jr., Hunkapiller M.W., Hood L.E., Walsh Poitras P., Reeve J.R. Jr., Hunkapiller M.W., Hood L.E., Walsh Poitras P., Regul. Pept. 5:197-208(1983)

-: FUNCTION: PLAYS AN IMPORTANT ROLE IN THE REGULATION OF INTERDICESTIVE GASTROUVESTINAL MOTILITY AND INDIRECTLY CAURITY RHYTHMIC CONTRACTION OF DUODENAL AND COLONIC SMOOTH MUSCLE.
Saccharomycetaceae;
            Saccharomyces cerevisiae (Baker's Eukaryota; Fungi; Ascomycota; Sacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Canis familiaris (Dog).

Canis familiaris (Dog).

Metazoa; Chordata;
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15-JUL-1998
                                   YOR302W.
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PIR; PT0052; PT0052.
Initiation factor; P:
NON_TER 22
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SUBUNIT: HETEROTRIMER COMPOSED OF AN ALPHA, A BETA, AND A GAMMA CHAIN.
CHAIN.
SIMILARITY: BELONGS TO THE GTP-BINDING ELONGATION FACTOR FAMILY.
                                                                                                                                                                                                                                                                                                             SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                          S00189;
A60313;
                                                                                                                                                        PIFTHSEL 10
                                                                                                                                                                             PAATHQDI 16
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3; Conserv
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3; Conserv
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                                            8 (Rel. 08, Created)
8 (Rel. 08, Last sequ
7 (Rel. 35, Last anno
R PEPTIDE.
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22 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Rel. 17, Created)
(Rel. 17, Last sequence update)
(Rel. 36, Last annotation update)
                                                                                                                                                                                                    Conservative
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                                                       sequence update)
annotation updat
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Pred.
            Saccharomycetes;
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                      yeast)
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            Saccharomycetales,
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Canis.
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RESULT
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Best Local S
Matches 5
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MEDLINE=97407910; PubMed=9261134;
Sugasawa T., Matsuzaki-Fujita M.,
Morooka S., Strosberg A.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; M16690; AAA34526.1; -.
EMBL; X01764; CAA25904.1; -.
EMBL; Z75210; CAA99620.1; -.
PIR; A26965; A26965.
PIR; S25434; S25434.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content use by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Poirey R., Cziepluch C., Tobiasch E., Jauniaux J.-C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Werner M., Feller A., Pierard A.;

"Nucleotide sequence of yeast gene CP Al encoding the small subunit
of arginine-pathway carbamoyl-phosphate synthetase. Homology of the
deduced amino acid sequence to other glutamine amidotransferases.";
Eur. J. Blochem. 146:371-381(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Werner M., Feller A., Messenguy F., Pierard A.;
"The leader peptide of yeast gene CPA1 is essential
translational repression of its expression.";
Cell 49:805-813(1987).
                                              STRAIN-WISTAR;
                                                           SEQUENCE.
                                                                                         Mammalia;
                                                                                                       Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chor
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Sequence and analysis of a 36.2 kb fragment from the right arm of yeast chromosome XV reveals 19 open reading frames including SNF2 (5', end), CPA1, SIV41, a putative transport ATPase, a putative ribosomal protein and an SNF2 homologue.";
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SEQUENCE FROM N.A.
MEDLINE-87215944;
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nes 5; Conserv
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                                                                                                                                                                                                                                                                                         LSNSOYTCOD
                                                                                                                                                                                                                                                                                                                                                                                                                                                        S0005828; YOR302W
                                                                                       ; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
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                                                                                                                                                                                                                                                                                                                                                                                                                             2979 MW;
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Pred. No.
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                 Guillaume
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               J.-L.,
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SPETTOCCCRRR

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P. C. C. C. W. W. W. D. S. C.

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RESULT 20
ALLS_MANSE
ID ALLS_M
AC P42559
DT 01-NOV
DT 01-NOV
DT 30-MAY
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Matches 4
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Best Local Similarity

Matches 3; Conser
               Eukaryota; Me
Pterygota; Ne
Sphingiodea;
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MOD_RES 1
MOD_RES 1
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P21144; P41497;
01-MAY-1991 (Rel. 18, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-NOV-1995 (Rel. 32, Last annotation update)
LEUCOMYOSUPPRESSIN (LMS) (LEM-MS).
LEUCOPHORA maderae (Madeira cockroach).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Orthopteroidea; Dictyoptera; Blattaria;
Blaberoidea; Blaberidae; Leucophaea.
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NON_TER
SEQUENCE
                                                                          ALLS_MANSE STANDARD: PRT: p42559; O1-NOV-1995 (Rel. 32, Created) O1-NOV-1995 (Rel. 32, Last sequence up 30-MAY-2000 (Rel. 39, Last annotation ALLATOSTATIN (MAS-AS).
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                Manduca sexta (Tobacco hawkmoth) (Tobacco hornworm).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Lepidoptera; Glossata; Di
Sphingiodea; Sphingidae; Sphinginae; Manduca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Holman G.M., Cook B.J., Nachman R.J.,
"Isolation, primary structure and synthesis of leucomyosuppressin,
an insect neuropeptide that inhibits spontaneous contractions of the
cockroach hindgut.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-HEAD;
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FUNCTION: MAY MEDIATE RELAXATION OF DEPO
IT BINDS IODOCYANOPINDOLOL AND SM-11044.
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INHIBITS THE SPONTANEOUS CONTRACTIONS
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PSAE_CUCSA
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                                        PSAE_CUCSA STANDARD; PRT; 19 AA. P42047; P42047; P642047; P742047; P75 (Rel. 32, Created) P75 (Rel. 32, Last sequence update) P8070SYSTEM I REACTION CENTRE SUBUNIT IV (PHOTOSYSTEM PROTEIN) (PSI-E) (PS I SUBUNIT 6) (FRAGMENT).
                                                                                                                                                                                                                                                                                                            -i- TISSUE SPECIFICITY: SECRETED BY THE SKIN -i- MASS SPECIFOCITY: SECRETED BY THE SKIN -i- MASS SPECIFOMETRY: MW-1844; METHOD-FAB.
Amphibian skin; Amidation.
MOD_RES 17 17 AMIDATION.
SEQUENCE 17 AA; 1845 MW: 6558748554305677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Neuropeptide.
MOD_RES
SEQUENCE 15
Cucumis sativus (Cucumber).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I;
                                       PSAE.
                                                                                                                                                                                                                                                                                                                                                                             Bradford A.M., Bowie J.H., Tyler M.J., Wallace J. "New antiblotic uperin peptides from the dorsal gaustralian toadlet Uperoleia mjobergii."; australian (1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Uperoleia mjobergii (Australian toadlet).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Bufonoidea; Myobatrachi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Proc. Natl. Acad. Scl. U.S.A. 88:9458-9462(1991).
-I- FUNCTION: STRONGLY INHIBITS JUVENILE HORMONE BIOSYNTHESIS IN VITRO
BY THE CORPORA ALLATA FROM FIFTH-STADIUM LARVAE AND ADULT FEMALES.
-I- SIMILARITY: BELONGS TO THE ALLATOSTATIN FAMILY.
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Kramer S.J., Toschi A., Miller C.A., Kataoka
Li J.P., Carney R.L., Schooley D.A.;
"Identification of an allatostatin from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE.
TISSUE-HEAD;
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COXN_THUOB ST
P80980;
01-NOV-1997 (Rel.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;

Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Scombroi
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"Characterization of genes that encode subunits of cucumber PS I complex by N-terminal sequencing.",

Biochim. Biophys. Acta 1059:141-148(1991).

-i- FUNCTION: MAY FORM COMPLEXES WITH FERREDOXIN AND FERREDOXIN-
OXIDOREDUCTASE IN PHOTOSYSTEM I (PS I) REACTION CENTRE.

-i- SUBCELLULAR LOCATION: CHLOROPLAST THYLAKOID MEMBRANE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
CYTOCHROME C OXIDASE POLYPEPTIDE VIIB-LIVER (EC
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SEQUENCE
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Arnold S., Lee I., Kim M., Song E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P80981;
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Photosynthesis; Photosystem I; Chloroplast; Thylakold membrane
NON_TER 19 19
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Kadenbach B.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J. Biochem. 248:99-103(1997).
FUNCTION: THIS PROTEIN IS ONE OF THE NUCLEAR-CODED POLYPE CHAINS OF CYTOCHROME C OXIDASE, THE TERMINAL OXIDASE IN MITOCHONDRIAL ELECTRON TRANSPORT.

CATALYTIC ACTIVITY: 4 FERROCYTOCHROME C + O(2) = 2 H(2)O
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                                                     STANDARD;
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Best Local :
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                                                                                                                                                                                                                                                                                                       15-JUL-1998
15-JUL-1998
15-JUL-1998
                                                                                                                                                                                                                                                                                                                                          PGK_CLOPA
P81346;
                                                                                                                                        "Two-dimensional gel electrophoresis separation sequence analysis of proteins from Clostridium [Electrophoresis 19:802-806(1998).

-i- CATALYTIC ACTIVITY: ATP + 3-PHOSPHO-D-GLYCEF
                                                                                                                                                                                              STRAIN=W5;
MEDLINE=98291870; PubMed=9629918;
                                                                                                                                                                                                                                                          Clostridium pasteuriar Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Thunnus obesus (Bigeye tuna).
Eukaryota; Metazoa; Chordata; Craniata;
Acthopterygil; Neopterygil; Teleostei;
Acanthomorpha; Acanthopterygil; Percomor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
CYTOCHROME C OXIDASE POLIFEPTIDE VIIB-HEART (
 SEQUENCE
                      Transferase; Kinase;
                                                                    -1- SUBCELLULAR LOCATION: CYTOPLASMIC.
-1- MISCELLANEOUS: ON THE 2D-GEL THE I
5.6, ITS MW IS: 56.2 KDA.
                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
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            NON_TER
                                   INTERPRO; IPRO01576; -.
PROSITE; PS00111; PGLYCERATE_KINASE;
                                                                                                      -!- PATHWAY: SECOND STEP IN THE SECOND
                                                                                                                                                                                       Flengsrud R., Skjeldal
                                                                                                                                                                                                                                               Clostridium.
                                                                                                                                                                                                                                                                                            PUTATIVE PHOSPHOGLYCERATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Arnold S., Le
Kadenbach B.;
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                                                          SIMILARITY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J. Blochem. 248:99-103(1997).
FUNCTION: THIS PROTEIN IS ONE OF CHAINS OF CYTOCHROME C OXIDASE, T MITOCHONDRIAL ELECTRON TRANSPORT.
                                                                                                                                3-PHOSPHO-D-GLYCEROYL PHOSPHATE
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(Rel. 36, Last sequence update)
(Rel. 36, Last annotation updat
OSPHOGLYCERATE KINASE (EC 2.7.2.
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                                                         BELONGS TO THE PHOSPHOGLYCERATE KINASE FAMILY
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                       Glycolysis
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Pred. No.
 749E31E595C85529 CRC64;
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2.7.2.3)
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Query Match Best Local Similarity

19

Score Pred.

NO;

DB 1; 2.1e+03;

Length

Db 6 TIEDID 11  Search completed: February Job time: 504 sec	4; Conse
	Conservative
5, 2001, 10:56:04	1; Mismatches
	1;
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	Gaps 0;

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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.

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Post-processing: Minimum Match 0%
Maximum Match 100%
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Perfect score:
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 protein search, using sw model
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103
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stylar glycoprotei
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glandular kallikre	chymotrypsin inhib	basic eosinophil p	2F3 domain - human	pyruvate dehydroge	bibrotoxin - Bibro	aquaporin-CHIP - h	30K serine protein	formate dehydrogen	protein kinase C i	T-cell receptor ga	seed storage prote	brain-derived neur	phage antigenic de	H+-transporting AT	T-cell receptor be

## ALIGNMENTS

coat protein VP1 - human poliovirus 1 (fragment)
C;Species: human poliovirus 1
C;Species: human poliovirus 1
C;Date: 01-Dec-1989 #sequence\_revision 01-Dec-1989 #text\_change 18-Jun-1993
C;Accession: \$02473
R;Martin, A.; Wychowski, C.; Couderc, T.; Crainic, R.; Hogle, J.; Girard, M.
EMBO J. 7, 2839-2847, 1988
A;Title: Engineering a pollovirus type 2 antigenic site on a type 1 capsid results in A;Reference number: \$02473; MUID:89030650
A;Accession: \$02473

A:Status: not compared with conceptual translation A:Molecule type: mRNA A:Residues: 1-16 <MAR>

2;

Length 16;

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hemocyanin chain II - Japanese spiny lobster (fragment)
(;Species: Panulirus japonicus (Japanese spiny lobster)
C;Date: 31-Dec-1988 *sequence_revision 31-Dec-1988 *text_change 01-Aug-1997
C;Accession: S00494
R;Makino, N.; Kimura, S.
Eur. J. Biochem. 173, 423-430, 1988
Eur. J. Biochem. 173, 423-430, 1988
A;Reference number: S00492; MUID:88196131
                                                                                                                         A;Molecule type: protein
A;Residues: 1-20 <MAK>
C;Superfamily: hemocyanin
C;Keywords: copper; hemolymph; hexamer; oxygen carrier
                                                                                                                                                                                                                                                                                                                  RESULT
S00494
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2; Mismatches
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RESULT

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Mol. Gen. Genet. 240, 146-150, 1993
A;Title: Saccharopolyspora hirsuta 367 encodes clustered genes similar to A;Reference number: S35194; MUID:93341453
A;Status: prolici
                                                                                                                                                                                                                                                                                                                                               thyrotropin-releasing hormone receptor, splice form 387 - rat (fragment) C;Species: Rattus norvegicus (Norway rat) C;Date: 30-Apr-1993 #sequence_revision 18-Nov-1994 #text_change 05-Nov-1999 C;Accession: A45096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      alpha-1-antichymotrypsin - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 24-Aug-1996 #sequence_revision 13-Mar-1997 #text_change 31-Mar-1997
C;Accession: S63374
R;Tsuda, M.; Sei, Y.; Ohkubo, T.; Yamamura, M.; Kamiguchi, H.; Akatsuka, A.;
Eur. J. Biochem. 235, 821-827, 1996
Ş
                                                                                                                                 A;Cross-references: GB:S51512; NID:g261982; PIDN:AAB24549.1; PID:g261983 A;Experimental source: GH3 anterior pituitary cells A;Note: sequence extracted from NCBI backbone (NCBIP:120927)
                                                                                                                                                                                             A;Status: preliminary; not compared with conceptual translation A;Molecule type: mRNA A;Residues: 1-15 <DE1>
                                                                                                                                                                                                                                                 R;de la Pena, P.; Delgado, L.M.; del Camino, D.; Barros, F.
J. Biol. Chem. 267, 25708-25708, 1992
A;Title: Two isoforms of the thyrotropin-releasing hormone receptor generated A;Reference number: A45096; MUID:93100278
A;Accession: A45096
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: The defective secretion of a naturally occurring alpha-1-antichymotrypsin vari A;Reference number: S62374; MUID:96184564
A;Accession: S62374
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A;Molecule type: DNA
A;Residues: 1-22 <GOU>
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Pred. No. 4e+(
1; Mismatches
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Pred. No.
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Pred. No. 2.9e+02;
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                                                       DB 2;
4e+02;
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3.7e+02;
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RESULT
S62890
                                                                             C;Species: Homo sapiens (man)
C;Date: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_
C;Accession: S62890
R;Oderwald, H.; Hughes, M.J.; Jost, J.P.
FEBS Lett. 382, 313-318, 1996
A;Title: Non-histone protein 1 (NHP1) is a member of the A;Reference number: S62889; MUID:96184511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Frlas-Lopez, J.
submitted to the Protein Sequence Database, July 2000
submitted to the Protein Sequence Database, July 2000
A:Description: Identification of cell wall proteins of Bacteroides fragilis to which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            probable bacteriophage receptor BactA {imported] - Bacteroides fragilis (fragment)
C;Species: Bacteroides fragilis
C;Date: 28-Jul-2000 #sequence_revision 28-Jul-2000 #text_change 28-Jul-2000
C;Accession: A59325
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c;Species: Engelmannia pinnatifida
c;Species: Engelmannia pinnatifida
C;Date: 14-Apr-1998 #sequence_revision 08-May-1998 #text_change 07-May-1999
c;Accession: S70611
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-14;15-24 <ODE>
                                                         A; Accession: S62890
                                                                                                                                                                                                                                   non-histone protein 1 75K chain - human (fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Status: preliminary
A;Molecule type: protein
A;Molecule type: protein
A;Residues: 1-21 <FRI>
A;Experimental source: strain ATCC 51477
A;Note: putative receptor for bacteriophage B40-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Description: Identification
A; Reference number: A59325
A; Accession: A59325
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R; Huynh, Q.K.; B
Biochem. J. 316,
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A;Status: pretain
A;Molecule type: prottein
A;Residues: 1-25 <GRA>
A;Experimental source: strain NRRL B-11019
A;Experimental source: nCBI backbone (NCBIP:130008)
                                                                                                                                                                                                                                                                                                                                                                                        R;KO, M.S.; Wang, X.; Horton, J.H.; Hagen, M.D.; Takahashi, N.;; Maezaki, Y.; Mamm. Genome 5, 349-355, 1994
A;Title: Genetic mapping of 40 cDNA clones on the mouse genome by PCR.
A;Reference number: 148934; MUID:94319082
A;Accession: 149404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Description: catalyzes the hydrolysis of 1,4-beta-xylosidic linkages in xylans A; Pathway: xylan degradation C; Superfamily: endo-1,4-beta-xylanase; endo-1,4-beta-xylanase homology C; Keywords: extracellular protein; glycosidase; hydrolase; polysaccharide degradation
Sz-glycoprotein - Persian tobacco (fragment) C;Specles: Nicotiana alata (Persian tobacco) C;Date: 23-Nov-1991 #sequence_revision 23-No C;Accession: PQ0194
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PQ0194
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C;Species: Mus Spretus (western wild mouse)
C;Date: 02-7ul-1996 #sequence_revision 02-Jul-1996 #text_change 05-Nov-1999
C;Accession: 149404
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R; Grabski, A.C.; Forrester, I.T.; Patel, R.; Protein Expr. Purif. 4, 120-129, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Streptomyces roseiscleroticus
C;Date: 03-Oct_1995 #sequence_revision 03-Oct-1995 #text_change 06-Dec-1996
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                                                                                                                                                                                                                                                                                                                   A;Cross-references: EMBL:U05689; NID:g497008; PIDN:AAB60461.1;
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Best Local Similarity
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Pred. No. 7.4e+02;
3; Mismatches 4
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Pred. No. 2e+05;
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A; Reference number: PQ0192

AA; Accession: PQ0194
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A;Title: Style proteins of a wild tomato (Lycopersicon peruvianum) associated with ex
                                                                                                                                       A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-18 <ESM>
A;Experimental source: rectal gland
A;Note: sequence extracted from NCBI backbone (NCBIP:149363)
C;Keywords: hydrolase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Wasserman, R.; Galili, N.; Ito, Y.; Reichard, B.A.; Shane, S.; Rovera, G.
J. Exp. Med. 176, 1577-1581, 1992
A;Title: Predominance of fetal type DJH joining in young children with B precursor ly A;Reference number: PHI302; MUID:93094761
A;Accession: PHI312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C:Species: Homo sapiens (man)
C:Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 07-May-1999
C:Accession: PH1312
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A;Residues: 1-15 <MAU>
A;Experimental source: style
C;Keywords: glycoprotein
                                                                                                                                                                                                                                                        R;Esmann, M.; Karlish, S.J.; Sottrup-Jensen, L.; Marsh, D.
Blochemistry 33, 8044-8050, 1994
A;Title: Structural integrity of the membrane domains in extensively trypsinized Na,K
A;Reference number: A54195; MUID:94297020
A;Recession: A54195
                                                                                                                                                                                                                                                                                                                                                                                 Na+/K+-exchanging ATPase (EC 3.6.1.37) - spiny dogfish (fragment)
C;Species: Squalus acanthias (spiny dogfish)
C;Date: 13-Oct-1994 #sequence_revision 18-Nov-1994 #text_change 23-Mar-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
A; Residues: 1-17 <WAS>
C; Keywords: heterotetramer;
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                       Query Match
Best Local Similarity
""" tches 5; Conserve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 23.3%;
Best Local Similarity 54.5%;
Matches 6; Conservative
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  6 ISNPAATHQDIDF 18
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                                          Score 24; DB
Pred. No. 7.4e
2; Mismatches
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Pred. No. 6.9e+02;
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                                      ; DB 2;
5.7.4e+02;
6;
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                                                                              Length 18
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                                              Indels
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C;Accession: S58242
R;Schnider, U.; Keel, C.; Defago, G.; Haas, D.
submitted to the EMBL Data Library, May 1995
A;Description: Th5-directed cloning of pqq genes from Pseudomonas fluorescens CHAO: thei
A;Reference number: S58239,
A;Accession: S58242
A;Molecule type: DNA
A;Residues: 'MYROHPSHPPORSNF',1-24 <SCH>
A;Residues: 'MYROHPSHPPORSNF',1-24 <SCH>
A;Note: in GenBank entry PFPOQABCF, release 116.0, the indicated alternative sequence (F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nemocyanin chain III - Japanese spiny lobster (fragment) C:Species: Panulirus japonicus (Japanese spiny lobster) C:Date: 31-Dec-1988 #sequence_revision 31-Dec-1988 #text. C:Accession: S00495
                                   300
                                                                                                                                                                                                                                                                                                                   NyArtorologuinoline quinone precursor pgqA - Pseudomonas fluorescens
NyAlternate names: pyrrologuinoline quinone biosynthesis A
C:Species: Pseudomonas fluorescens
C:Date: 18-Feb-2000 #sequence_revision 18-Feb-2000 #text_change 18-Feb-2000
                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
S58242
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A:Title: Predominance of fetal type DJH joining in young children A; Reference number: PH1302; MUID:93094761
A; Accession: PH1364
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C;Keywords: copper; hemolymph; hexamer; oxygen carrier
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;ACCESSION: Kimura, S.
R;Makino, N.; Kimura, S.
Eur. J. Biochem. 173, 423-430, 1988
Eur. J. Biochem. 173, 423-430, 1988
A;Title: Subunits of Panulirus japonicus hemocyanin.
A;Title: Subunits of Panulirus japonicus hemocyanin.
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C;Keywords: heterotetramer; immunoglobulin
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A; Residues: 1-23 <WAS>
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C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 07-May-1999
C;Accession: PH1364
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: S00492; A; Accession: S00495
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                               Keywords: quinoprote: 16,20/Product: pyrro.
                                                               Gene: pqqA
Superfamily: pyrrologuinoline quinone precursor
                                                                                                             Genetics:
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Best Local Similarity 42.
Matches 6; Conservative
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Best Local :
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Local Similarity 55:6%;
nes 5; Conservative
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                             pyrrologuinoline quinone #status predicted <MAT>
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Pred. No. 7
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9.9e+02;
2;
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7.9e+02;
                                                                   pqqA
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                           stylar glycoprotein 3 - Persian N;Alternate names: glycoprotein C;Species: Nicotiana alata (Pers
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PQ0174
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JP0045
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Best Local S
Matches 4
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ribosomal protein L30 - Staphylococcus C; Species: Staphylococcus aureus C; Date: 10-Mar-1994 #sequence_revision C; Accession: JP0045 R; Ochi, K.
                                                                                                                                                                                                                                                     A; Molecule type: protein
A; Residues: 1-25 < OCH>
C; Superfamily: Escherichia coli ribosomal protein
C; Keywords: protein biosynthesis; ribosome
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Best Local Similarity
----hes 7; Conserve
                                                                                                                                                                                                                                                                                                                         A; Reference number: JP0042
A; Accession: JP0045
                                                                                                                                                                                                                                                                                                                                                          submitted to JIPID, February 1994 A; Description: Phylogenetic diversity
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A; Map position: 17q11.2-17q11.2
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A; Residues: 1-24 < RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Analysis of mutations at the neurofibromatosis A;Reference number: I54329; MUID:93258316 A;Accession: I54329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Accession: I54329
R;Upadhyaya, M.; Shen, M.; Cherryson, A.; Farnham, J.; Maynard,
Hum. Mol. Genet. 1, 735-740, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: Homo sapiens (man)
C;Date: 01-Nov-1996 #sequence_revision 01-Nov-1996 #text_change 05-Nov-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene NF1 protein - human (fragment)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Status: preliminary; translated from GB/EMBL/DDB
                                                                                                                                                                 Query Match
Best Local Similarity
Matches 5; Conserv
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tobacco (fragment)
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Pred. No.
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Pred. No. 1.1e+03
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Pred. No. 1e+03;
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1e+03;
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alata (Persian tobacco)

j

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A; Cross-references:

EMBL:D17510; NID:g529643; PIDN:BAA04382.1;

PID:g1262665

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C; Comment: T
C; Superfamil:
C; Keywords:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R; Wasserman, R.; Galill, N.; Ito, Y.; Reichard, B.A.; Shane, S.; Rovera, G.
J. Exp. Med. 176, 1577-1581, 1992
A;Title: Predominance of fetal type DJH joining in young children with B pr A;Reference number: PH1302; MUID:93094761
A;Accession: PH1304
A;Residues: 1-22 <WASS>
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C;Accession: PQ0174
R;Jahnen, W.; Batterham,
                                                                                                                                                                                                 C;Accession: H49410
R;Rommelaere, H.; Van Troys, M.; Gao, Y.; Melki, R.; Cowan, N.J.; Vandekerckhove, J.; Aproc. Natl. Acad. Sci. U.S.A. 90, 11975-11979, 1993
A;Title: Eukaryotic cytosolic chaperonin contains t-complex polypeptide 1 and seven rel A;Reference number: A49410; MUID:94089752
B;Accession: H49410
                                                                                                                                                                                                                                                                                                               r-complex polypeptide 1 homolog (peak 7 fraction) -
N;Alternate names: chaperonin homolog (peak 7)
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 07-Oct 1994 #sequence_revision 07-Oct-1994 #
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A;Title: Identification, isolation, and N-terminal sequencing of style glycoproteins A;Reference number: PQ0173; MUID:92404717
A;Accession: PQ0174
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Keywords: heterotetramer; immunoglobulin
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Pred. No. 8.9e+02;
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Brain Res. Mol. Brain Res. 11, 283-290, 1991
A;Title: A Synaptic vesicle specific GPP-binding protein from ray electric organ.
A;Reference number: A43958; MUID:92099847
A;Accession: B43958
                                                                                                                                                                                                                                                                                                                                                                          GTP-binding protein, synaptic vesicle-specific - marbled electric ray (fragments) C;Species: Torpedo marmorata (marbled electric ray) C;Date: 12-Mar_1993 #sequence_revision 12-Mar-1993 #text_change 28-May-1999
                                                                                                                                                                    C; Keywords: GTP binding
                                                                                                                                                                                  A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-23 <VOL>
C;Superfamily: ras transforming
                                     11 ATHQDIDFLI 20
2 AVDQNFDYMV 11
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R;Misono, H.; Sugihara, K.; Kuwamoto, Y.; Nagata, S.; Nagasaki, S. Agric. Biol. Chem. 54, 1491-1498, 1990
A;Title: Leucine dehydrogenase from Corynebacterium pseudodiphtheriticum: Purificatio A;Reference number: PT0076; MUID:91103959
A;Accession: PT0076
                                                                                                                                                                             nypothetical protein 25 - Japanese black pine chloroplast C;Species: chloroplast Pinus thunbergiana (Japanese black pine) C;Date: 14-May-1999 #sequence_revision 14-May-1999 #text_change C;Accession: T07504
                                                                                         R; Wakasugi, T.; Tsudzuki, J.; Ito, S.; Nakashima, K.; Tsudzuki, T.; Proc. Natl. Acad. Sci. U.S.A. 91, 9794-9798, 1994
A;Title: Loss of all ndh genes as determined by sequencing the entipa; Reference number: Z16030; MUID:95024047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   leucine dehydrogenase (EC 1.4.1.9) - Corynebacterium diphtheriae C;Species: Corynebacterium diphtheriae C;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 0 C;Accession: PT0076
A; Molecule type: DNA
A; Residues: 1-25 <WAK>
                                                                      A; Reference number: 216030; A; Accession: T07:504
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                                           A; Status: preliminary; translated
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RESULT 25
S35926
S35926
T-cell receptor gamma chain - human (fragment)
C:Species: Homo sapiens (man)
C:Date: 06-Peb-1995 #sequence_revision 06-Peb-1995 #text_change 30-May-1997
C:Accession: S35926
R:Mathioudakis, G:, Platsoucas, C.D.
submitted to the EMBL Data Library, May 1993
A;Bescription: An alternative splicing between VgammaJgamma2.3 and Cgamma2 gene segments
A;Accession: S35926
A;Accession: S35926
A;Accession: S35926
A;Accession: S35926
A;Residues: 1-25 CMAT>
A;Residues: 1-25 CMAT>
A;Cross-references: EMBL:Z22688
C;Keywords: T-cell receptor
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A;Genome: chloroplast
C;Keywords: chloroplast
Search completed: February 5, 2001, 10:49:32 Job time: 745 sec
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7 YLLIIRNSLAVEQHL 21
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